THE LEGISLATIVE ASSEMBLY OF
BRITISH COLUMBIA

THE PATH TO HEALTH AND WELLNESS:

MAKING BRITISH COLUMBIANS HEALTHIER BY 2010

SELECT STANDING COMMITTEE ON HEALTH

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November 25, 2004

To the Honourable,
Legislative Assembly of the
Province of British Columbia
Victoria, British Columbia

Honourable Members:

I have the honour to present herewith the First Report of the Select Standing Committee on Health for the Fifth Session of the 37th Parliament.

This report covers the work of the Committee with respect to finding effective strategies to encourage British Columbians to adopt lifelong health habits that will both improve their health and sustain the health care system.

Respectfully submitted on behalf of the Committee.

Val Roddick, MLA
Chair

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COMPOSITION OF THE COMMITTEE

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CLERK TO THE COMMITTEE

Kate Ryan-Lloyd, Clerk Assistant and Committee Clerk

COMMITTEE STAFF

Anne Mullens, Consultant to the Committee

Brant Felker, Committee Researcher

TERMS OF REFERENCE

On April 1, 2004, the Select Standing Committee on Health was empowered to examine, inquire into and make recommendations with respect to finding effective strategies to change behaviour and encourage people to adopt lifelong health habits that will both improve their health and sustain the health care system.

1. Conduct consultations and report on recommendations from the Select Standing Committee on Health Reports from 2001 and 2002.
    - Investigate other successful health promotion campaigns in other jurisdictions to analyze their potential effectiveness in BC.
    - Undertake discussions on how to promote "healthy lifestyles" including the appropriate use of incentives and disincentives to help influence public behaviour.
2. Consider any potential financial savings to the Health Care system as a result of improved fitness of the general population and children and youth in particular.

In addition to the powers previously conferred upon the Select Standing Committee on Health, the Committee shall be empowered:

(a) to appoint of their number, one or more subcommittees and to refer such subcommittees any of the matters referred to the Committee;

(b) to sit during a period in which the House is adjourned and during any sitting of the House;

(c) to adjourn from place to place as may be convenient; and

(d) to retain such personnel as required to assist the Committee,

and shall report to the House no later than November 25, 2004 to deposit the original of its reports with the Clerk of the Legislative Assembly during a period of adjournment and upon resumption of the sittings of the House, the Chair shall present all reports to the Legislative Assembly.

EXECUTIVE SUMMARY

Many of the diseases and injuries that are making British Columbians sick — filling up our hospitals, our doctors' offices, and our graveyards — are preventable. But under the current focus of our health care system, we spend almost all our resources caring for people after they are ill. To make British Columbians healthier, to greatly reduce suffering, and to create a provincial health care system that is truly sustainable, we must do more to prevent disease, illness, and injury from occurring in the first place.

The annual budget for provincial health spending is now $10.9 billion and growing by up to $1 billion each year. But less than 3 percent of our health spending is devoted to activities aimed to improve health and prevent illness and injury. In short, we have a sickness care system, not a health care system. Many of the most common diseases are caused by one or more of the following risk factors: smoking, poor diet, physical inactivity, obesity, and irresponsible use of alcohol. It is estimated that at least 40 percent of all chronic diseases could be prevented.

We have a sickness care system, not a health care system

Failing to prevent the preventable in health care exacts a huge toll in human pain, suffering, disability, and premature loss of life that impacts individuals and families in B.C. every day. This, in itself, is reason to do more. But it is also costing us billions of dollars in medical spending and greatly contributing to our ever-soaring, unsustainable cost of health care. The evidence is clear: a greater focus on effective prevention is a critical part of the health care puzzle that will keep people out of our overcrowded hospital systems, reduce crisis care intervention, reduce death and suffering, and create a healthier, more active and productive population.

In April, 2004, the Select Standing Committee on Health was mandated to find effective strategies to change behaviour and encourage people to adopt lifelong health habits that will both improve their health and sustain the health care system. In the Committee's subsequent deliberations over the last year, we have heard from a wide range of witnesses about the role of individuals, communities, private organizations, businesses, and various levels of government to improve our individual and collective health. We have researched a wide range of health promotion and illness prevention literature, as well as examined activities in other jurisdictions both nationally and internationally.

This report is the result of these hearings and deliberations. In it, we make 29 recommendations for policies, programs, strategies and infrastructure to improve the health of British Columbians. Those looking for quick, easy solutions, however, be warned: there is no quick fix. To achieve results it will take concentrated, coordinated effort, supported over a number years. The biggest challenge will be to turn the tide of the alarming rates of obesity, poor diet and physical inactivity that are now becoming epidemic in our society. A great deal of long, hard work is ahead of us.

No quick fix

Fortunately, British Columbia is at a unique and advantageous moment in its history. In just five years, Olympic-class winter athletes will arrive in BC and showcase their prowess to the world. In the time leading up to the games, each and every athlete — our own included —

will be training hard to achieve his or her own personal best. We as British Columbians can join them by going for our own personal bests, too, and by doing what we can to improve our own health. That could start with something as simple as taking the stairs for the first time at work, eating an extra piece of fruit each day, walking instead of driving to the store, or finally quitting smoking.

Winning athletes, however, never do it alone. They have coaches with the right coaching technique, good equipment, the right training venue, and a team of supporters behind them. This same principle — supportive policies and environments — applies equally to helping British Columbians become healthier and fitter over the next five years.

Make the healthy choice the easy choice

During the course of the Committee's deliberations, we have learned a fundamental principle about improving people's health: telling people how and why they need to change does not work. Instead, healthy change comes from a complex, long-term and multi-layered process that *enables* people to exert control over the decisions that influence their health. This is best summed up by popular public health slogan: "Make the Healthy Choice the Easy Choice." This same principle, of enabling rather than telling, infuses the whole report — from how to engage and inspire local communities, and foster healthier schools, to how to motivate the workplace and give the tools and skills to people with chronic disease to help them take control of their illness themselves. The report details the policies and approaches in health promotion, learned over the last 30 years primarily with tobacco control, that enable rather than tell.

The need to act now is urgent. A number of factors are coming together that could potentially swamp the health care system. These include a rapidly aging population, increasing chronic diseases, decreasing levels of physical activity, increasing rates of obesity (most alarmingly among our children), ongoing tobacco-induced illness, rapidly increasing diabetes rates, and a huge toll from preventable injuries. The report details the direct medical costs — hospitals doctors, pharmaceuticals and other medical spending — for each of these burgeoning issues. It also provides estimates of the indirect costs to society from premature loss of life, lost productivity and associated costs. In addition, we estimate the potential savings from a very modest improvement to risk factors, such as getting just 10 percent more British Columbians to become physically active and reducing our smoking rates down to just 12 percent across the province. Savings could be even greater if we can motivate even more people to adopt healthier habits.

	Estimated Direct Health Costs (BC) per year	Estimated Indirect Costs (BC) per year	Estimate direct health savings
Chronic Disease	$3.9 billion	$5.4 billion	$390 million
Obesity	$380 million	$350-$450 million	$38 million
Physical Inactivity	$187 million	$236 million	$16.1 million
Injuries	$852 million	$2.1 billion	$85 million
Diabetes	$760 million	Unavailable	$75 million
Tobacco	$521 million	$904 million	$160 million

While the cost of poor nutrition has not yet been estimated, the B.C. Nutrition Survey has clearly illustrated that most adult British Columbians are not getting the types of food and nutrients they need to maintain good health and obtain optimal body weight. Not only were the majority of people not getting the recommended five servings of fruit and vegetables a day, 25 percent of their daily calorie intake was coming from high calorie, low nutrient "junk food" such as chips, pop, candy, jams and alcohol.

Clearly, more investment to enhance prevention is needed. The Committee recommends that funding for public health initiatives gradually increase from 3 percent to at least 6 percent. Due to the difficulty of shifting funds from acute care to preventive care, the Committee recommends that any increase in funding come out of new money from recent federal/provincial agreements and from portions of any government budget surpluses. Money to invest in health prevention may also come from new initiatives to improve patient safety, by reducing the cost and patient burden that arises from preventable adverse events in hospital settings. Effective investments, however, needn't be solely for traditional "health" programs. What this report clearly establishes is that investments that promote the general well-being of British Columbians promote good health while benefiting all of society. A good example of this principle is investment in "Rail Trails," which convert old rail lines into recreational corridors. These new trails would promote physical activity, draw tourists, spur new businesses catering to users of the trail, create green space, and generate millions to local economies.

Increase public health funding to 6 percent

In this report, the Committee outlines the lessons from the last three decades about how to make communities, schools and workplaces healthier. The Committee notes that activities at the community and municipal level are crucial. A wide body of research — including groundbreaking BC work on early child development detailed in the report — shows that the quality of our communities and neighbourhoods has a direct bearing on the health of its residents, even its youngest citizens. An attribute called "social capital," defined as the bonds of trust, social networks and civic engagement, has been clearly linked to health. Efforts to address specific community issues and to improve quality of life are more effective when community members are engaged in the process and take collective ownership of programs or initiatives themselves. Strong communities are built on consensual rather than coercive relationships. This same principle applies to schools and workplaces, too. The success (and sometimes failure) of tobacco control initiatives over the years show how all the principles come into play. While B.C.'s tobacco rates are now the best in Canada, the tobacco fight is far from over. It remains the leading preventable cause of death in the province. To make further reductions in B.C.'s smoking rate, efforts must continue to reduce the number of smokers, particularly in school, community and workplace settings.

Many fruitful areas exist to potentially enhance our health and wellness, which this report, however, is unable to give a full discussion. Clinical prevention — such as screening tests and blood pressure checks in the doctor's office — can often identify and treat problems early. Good sexual health practices can minimize disease and unwanted pregnancy. Abstaining from drug use and drinking responsibly can prevent many health problems. In addition, the important aspects of promoting prevention programs in our Aboriginal and multi-cultural

populations must be saved for a future exploration. Some complementary and alternative medicine practices, which many British Columbians currently use, may also provide prevention benefits that are also beyond the scope of this current report.

Instead, the report focuses primarily on the triple threat of increasing physical inactivity, poor diet and obesity and examines the powerful changes in society over the last century that have contributed to this trend. The World Health Organization has called obesity the "greatest neglected public health problem of our time", and many reports note that soon it will over take tobacco as the leading preventable cause of illness. While proof of successful strategies to reduce obesity and to promote healthy eating and active lives on a population-wide level does not yet exist, many countries are embarking on ambitious programs in a struggle to make a change. We detail new efforts by Britain and Australia to turn the tide, which include free pedometer promotions, wide-scale promotion of fruits and vegetable consumption, the promotion of healthier menus in schools, and enhancement of the medical profession's ability to help patients lose weight and make lifestyle changes.

As noted above, British Columbia is in a unique position, as host of the 2010 Olympic Games, to embark on a strategy to capture the spirit and excitement of the games to make all of us fitter and healthier over the next five years. In an inspiring three-part presentation, the Provincial Health Officer, representatives from a new group called the B.C. Healthy Living Alliance, and the president of the 2010 LegaciesNow organization detailed a collaboration already taking shape to build on the Olympic spirit to enable wide spread improvement in levels of obesity, physical activity and healthy food consumption particularly among B.C.'s children and youth. In short, the collaboration brings together a number of B.C. ministries, health organizations and wide-array of community participants and organizations to create a powerful network linking more than 25,000 people throughout the province that can be our army to help us fight the epidemic of lifestyle-related behaviours that are making us ill.

The Committee strongly endorses using this ready-made network to launch a province-wide strategy enabling British Columbians, particularly children and youth, to become fitter and healthier over the next five years so that we are the healthiest jurisdiction ever to host an Olympic Games.

In the report we also detail efforts to reduce the toll of unintentional injuries, to improve the management of chronic disease, to understand and respond to the complex factors around early childhood development, and to launch a province-wide information system, using the telephone number 211, that will help residents find the services they need to start changing their lives for the better. Finally, we detail a few policy and structural changes that may create more incentives for us to improve our outcomes and spur the right changes to keep us healthier.

The path to health and wellness for British Columbians will not be an easy road to travel. We have a lot of distance to go and some of it will be difficult trailblazing, particularly to successfully tackle obesity. But compared to the rest of Canada and most of the world, we already have a head start. We already have the fittest most active population in Canada. We have the lowest number of smokers. We have the longest life span. We live in a geographic area noted for its beauty and the ready availability of a wide range of healthy outdoor pursuits for all levels of ability. Together, with the right combination of policies and

programs, we can get more British Columbians experiencing the joy of movement and the increased vitality that comes from healthier living. It starts at home building healthy B.C. families.

However, unlike the usual scenarios that so often arise when examining our acute care system, this part of health care is good news. We can make a huge difference, but we have to start now. As one witness before the Committee so aptly noted, it is not about punishment or lecturing, it is instead sending out an exciting invitation to experience our own health and wellness beginning now and culminating in 2010.

PROLOGUE: PROGRESS ON PREVIOUS RECOMMENDATIONS

In the fall of 2001, The Select Standing Committee on Health was mandated by the B.C. Legislature to consult widely across the province to find ways to sustain and improve our health care system. In December 2001, after hearing from more than 350 witnesses and receiving some 300 written submissions, the Committee released its landmark inaugural report, ***Patients First: Renewal and Reform of British Columbia's Health Care System***. The Committee made 88 recommendations to make our health care system more equitable, more accountable, more efficient, and more focused on patients needs. These addressed nine key areas:

- **Principles of reform:** building in equity, patient-centred care, evidence-based decision making and accountability at all levels of the health systems.
- **Regional restructuring:** reorganizing Health Authorities, Acute Services and Ambulance Services.
- **Primary care reform:** supporting family doctors and multidisciplinary teams at the first level of health care to proactively meet patients' needs.
- **Human Resources:** providing adequate well-trained, enthusiastic and committed health professionals.
- **Preventive Health:** finding effective strategies to change behaviour and prevent chronic disease.
- **Information Management:** moving the health care system from primarily pen-and-paper data collection into the efficiencies of the computer age.
- **Chronic and Continuing Care:** ensuring the elderly or those with chronic disease, disability or mental health needs get the care and support they need to keeps them living with good quality of life in the community for as long as possible.
- **Pharmacare:** ensuring a safe, equitable, sustainable province drug program.
- **Financial Strategies:** exploring creative, alternative methods to fund health care or offset costs.

In 2002, the Committee's second report: ***Patients First 2002: The Path to Reform***, detailed progress during the year. Almost 75 percent of the recommendations had been met. Health authorities were streamlined from 52 to 6, performance agreements were introduced, access standards to acute and long term care were developed, a Chronic Disease Management Strategy was initiated, and Pharmacare was reviewed. We noted that much had been accomplished in a year to create a coordinated, accountable, systematic and rational deployment of health services.

Nevertheless, the Committee raised concerns and suggested a further 37 recommendations to help BC down the path of health care reform. In particular, we were concerned about:

- **Communication:** more forms of public information, communication and consultation were needed to explain the rationale and day-to-day logistics for the changes underway.

- **Evaluation:** a continued focus on ongoing assessment of changes underway was needed to ensure reforms were producing the desired outcomes.
- **Continuing focus on key initiatives:** particularly primary health care reform, chronic disease management, ambulance services, and Aboriginal health.

During our latest round of deliberations, Deputy Minister of Health, Dr. Penny Ballem, appeared before the Committee on June 22, 2004, to update the progress since 2002. Full text of her testimony is available online at
http://www.legis.gov.bc.ca/cmt/37thparl/session-5/health/index.htm

Dr. Ballem noted that the majority of the recommendations are implemented or in the process of being implemented. In particular, the following developments have occurred:

Communications:
- BC Health Guide program has received greater promotion and enhancement.
- Health Authorities (HAs) have initiated community consultation on redesign plans.
- HAs' board meetings are now partially open to the public.
- New "Assisted Living Registrar" is improving communication, regulation and administration around assisted living issues.

Accountability:
- Continued focus on a Ministry Service plan with goals, objectives and outcomes.
- Continued focus and refinement on HA performance agreements.
- Implementation and review of population needs based funding formula.
- Annual reports by the Provincial Health Officer on key health issues such as water quality, falls prevention and progress toward health goals.
- Reduction in administrative costs by $70 million.

Acute Care Reform
- Monitoring the consolidation of acute care services and access standards.

Home and Community Care
- Implementation of "Continuum of Care" model focusing on home and community care.
- Ensuring care plans, supports and services are in place prior to a move.

Primary Health Care Reform
- Increased initiatives throughout province, supported by federal funding over five years. Projects are partnerships between the HAs and Ministry, and include chronic disease management, aboriginal and seniors health, palliative care, enhanced maternity care and others.

Pharmacare
- Implementation of Fair Pharmacare Program which is now being evaluated.
- Implementation of the National Common Drug Review, in which all provinces collaborate in assessment of new drugs.

BC Ambulance Service (BCAS)

- Initiation of the BCAS redesign, including new governance/operational structure.
- Creation of new Emergency Health Services Commission.

Information Systems:

- Continued focus to build IT capacity and integration building on existing systems.

Public/Private Partnerships

- P3 activities are being further developed and monitored, such as MSA Abbotsford Hospital and Cancer Centre and Vancouver's Academic Ambulatory Care Centre.

Key public health, preventive health, and chronic disease management activities will be discussed at greater length in the following document.

Recommendation #1:

The Committee recommends that the impact of ongoing health reform activities continue to be monitored and evaluated by each health service delivery area to ensure their effectiveness and that the results are openly communicated to the public.

SETTING THE CONTEXT

The sayings, *"An ounce of prevention is worth a pound of cure,"* and *"A stitch in time saves nine,"* are truisms we hear all our lives. No one argues with the wisdom of taking necessary steps now to prevent bigger problems in the future. And yet, when it comes to our personal health, and the operation of our health care system, that logic is often ignored. Instead, we focus most of our energies, and almost all our health care dollars, throwing "pounds of cure" at health problems that could have been minimized or prevented completely with earlier action.

At least 40 percent of chronic diseases are preventable

Chronic diseases like cancer, heart disease, diabetes, hypertension, and respiratory disease are now among the most common and costly health problems facing British Columbians. They are also among the most preventable. It is estimated that at least 40 percent of all chronic diseases could be prevented by one or all of the following actions: stopping tobacco use; increasing physical activity, improving diet, reducing obesity, and using alcohol more responsibly. Many injuries, too, are not random, unavoidable "accidents", but rather are highly predictable events that occur most often to identifiable populations doing specific activities. The vast majority can be prevented with the right actions, programs and policies.

Failing to prevent the preventable in health care exacts a huge toll in human pain, suffering, disability, and premature loss of life that impacts individuals and families in B.C. every day. This, in itself, is reason to do more — as individuals, communities and government — to improve the health and wellness of British Columbians. Thousands of lives will be saved; suffering and disability will be averted. But the failure to act now to prevent illness and injury arising in the future is also costing us billions of dollars in medical spending and greatly contributing to our ever-soaring, unsustainable cost of health care.

Health care spending grows by about 7 % per year but revenue by only 4 %

Three years ago, in the fall of 2001, when the Select Standing Committee on Health first began looking at ways to make our health care system more efficient and sustainable, health care spending by the provincial government had reached an unprecedented $9.5 billion per year. Since that time the budget has increased yet another $1.4 billion. The current $10.9 billion budget consumes more than 40 percent of all government spending. Health spending over the past decade has typically grown by at least seven percent annually, while revenue increased by only three to four percent. Yet demands for more money have been insatiable. Every day brings more pleas for funding of this treatment, or that surgery, or some other equally urgent health need in some corner of the province. Public health spending — which includes health protection, population health promotion and illness prevention — receives just three percent of the current health care budget. In our crisis-driven "sickness system," we devote almost all of our resources and energy to patching up people who are already ill, like firemen pulling people out of burning buildings, but doing little to prevent the fires from starting.

In our two previous reports, the Committee laid out a number of recommendations to improve the efficiency and effectiveness of our health care system and to use the billions we spend more wisely.[1] But it is fundamentally clear: health care costs will never become fully sustainable until we become more successful at preventing more illnesses and injuries in the first place.

Health care costs will never be sustainable until we prevent more illness

Accordingly, the Committee was mandated in April, 2004 to find effective strategies to change behaviour and encourage people to adopt lifelong health habits that will both improve their health and sustain the health care system. Over three months we heard from witnesses about the role of individuals, communities, private organizations and business, and various levels of government to improve our individual and collective health. We researched health promotion and illness prevention activities in other jurisdictions both nationally and internationally.

This report is the result of those deliberations. It provides estimates of the staggering costs of preventable illness and injury in B.C. and how much we would save with only a 10 to 20 percent improvement to the status quo. It highlights what we know about successful prevention and health promotion. It stresses the importance of healthy, engaged communities as an essential cornerstone of a healthy population. It profiles a few unique B.C. programs that are already garnering world attention and putting B.C. at the forefront of health promotion. It draws on national and international experience to suggest ways to further improve health and change behaviours. It suggests approaches to enlightened health and social policies that create the right environment for effective health promotion. And, as B.C. is hosting the world at the 2010 Winter Olympics, it lays out a plan to build on the enthusiasm and spirit of excellence of that unique event in our history to improve health and wellness in B.C.

Embracing Personal Bests

In just five years time, leading winter athletes will arrive in B.C. and showcase their skill and expertise to the world. In the days and years leading up to the games, all the athletes, our own included, will be training hard to be able to achieve their personal bests. We as British Columbians can join them, each and every one of us, by trying for our own personal bests, too. It may be as simple as routinely taking the stairs for the first time at work, or finally, after dozens of attempts, successfully quitting smoking.

Individuals can't do it alone; Supportive environments and policies are essential

It is important to note, however, that whether one is trying to win a medal, or simply become more physically active or eat a healthier diet, it is difficult to do it alone without help. To be successful, athletes almost always need the right coach with the right coaching technique, the most up-to-date equipment, the right training venue, and appropriate funding

[1] A brief update on progress towards those recommendations appears in the Prologue

to reach their goals. As the Committee heard repeatedly from witnesses, supportive environments are essential for health gains, too.

Just like athletes, British Columbians will need "coaches," venues and supportive policies to adopt healthier lifestyles. British Columbians will need access to up-to-date, accurate, easy-to-read information and education. They will need access to good nutritious food, safe places to walk, sports equipment, bike paths and trails. They will need strong, healthy and empowered communities in which to live, that feature high levels of cooperation, trust, engagement and social connectedness. These sorts of features, collectively called "social capital," are shown to greatly improve the health of the population and create livable, healthy communities. They will need the support of public policies that understand health is not only hospital care and crisis intervention. And they'll need adequate funding for these actions to take place. All these principles are summed up in the popular public health slogan: "Make the Healthy Choice the Easy Choice." It is this sort of multi-layered, comprehensive public health that will take us to the next level of improved health and wellness (see sidebar.)

Longer healthier lives: Thank Public Health

Over the course of a single century life expectancy has increased by more than 2 decades.

That huge gain did not come primarily from clinical, acute care medicine – hospitals, doctors, surgeries and drug treatments – but largely from public health measures and social change. Clean water, good sewage practices, improved infection control and wide-scale immunizations, along with improved housing, education, literacy, and better nutrition are credited with bringing about the greatest gains in health status and longevity (McKeown, 1980).

To achieve the next level of improved health and wellness, the Committee was told that we must enact similar population-wide public health measures and policies at the national, provincial and local level that help create engaged, empowered individuals and families, living in healthy, socially-connected communities.

Together with health professionals, health organizations, communities, business groups, the general public and individuals, the provincial government can introduce comprehensive, collaborative, and multi-level strategies to get British Columbians on a new path of health and fitness. It will be a path that helps us stay out of hospitals and emergency care, a path that embraces diet and exercise, and school programs, community actions and tax incentives. That's the path to becoming the healthiest and fittest jurisdiction to ever host an Olympic Games, and that's the direction we need to move to create a sustainable health care system in this province.

> *"If we were to implement some coherent, coordinated programs with partners, what would we have? We'd definitely have a healthier population, less pain and suffering, less disability, longer lives, improved health status. We'd certainly reduce pressures on the health care system, which would reduce some of the pressures on other government programs, like education and the environment, which in turn could improve health. And it will reduce indirect costs [from productivity losses due to poor health] — and for those of you who like to keep an eye on the bottom line — [create] a more attractive climate for investment as well."* - Dr. Perry Kendall, Provincial Health Officer

What is Public Health?

Public health is defined as the science and art of preventing disease, prolonging life, and promoting health through the organized efforts of society. Unlike the acute care system, which focuses on individual health problems, public health focus actions at the population level.

A recent report, *The Renewal of Public Health in Canada*, commissioned by the federal government in the aftermath of the SARS outbreak, looked at the role and organization of Public Health in Canada and the world. Most commonly called "The Naylor Report," after its lead author Dr. David Naylor, the report noted that many countries have tried to define the essential functions of public health and no single list exists. The Naylor report recommended the use of a list created by the Canadian Advisory Committee of Population Health, which recommended the following five essential functions:

- **Population Health Assessment:** Monitoring the ongoing health of the population, the health status of various groups and understanding the underlying factors contributing to health status; creating report cards to track progress in health improvement.
- **Health Surveillance:** Tracking and reporting rates and trends in illness, disease and injury, such as early recognition of communicable disease outbreaks, cancer risks, new injury trends, food-borne disease outbreaks and emerging infectious agents. Reporting to physicians, government and the public about increasing threats, what to look for, and the intervention required.
- **Health Protection:** Environmental control of illness such as water treatment monitoring, restaurant and food inspections, air quality monitoring, child care and community care facility inspections, and emergency preparedness and disaster response.
- **Disease and Injury Prevention:** Programs and activities to minimize or eliminate the occurrence of disease and injury. Activities include immunization programs, investigation and control of disease outbreaks, early detection of cancers (i.e. organization of PAP screening or mammography screening programs); encouraging healthy behaviours (such as not smoking, healthy eating, physical activity and bicycle helmet use), fortification of water with fluoride to reduce dental caries, fortification of flour with folic acid to reduce birth defects.
- **Health Promotion:** Overlapping with disease and injury prevention, particularly in the targeting of education programs to encourage safer and healthier lifestyles, health promotion largely features public health officials working with individuals, agencies and communities to improve health through healthy public policy, community-based interventions and public participation. As the Naylor report notes, comprehensive approaches to health promotion may involve community development or policy advocacy and action regarding the environment and socioeconomic determinants of health and illness. This more expansive aspect of health promotion is sometimes criticized as "health imperialism" or "social engineering."

The Naylor report called for a massive increase in spending by the federal government to repair the fractured nature of public health in Canada, the creation of a Chief Public Health Officer for Canada, and the creation of a national agency, at arms-length from government, modeled after the US Centre for Disease Control, which would coordinate public health actions in Canada. These recommendations were heeded with the federal creation of the new **Public Health Agency of Canada** in spring of 2004, the new agency is charged with leading national efforts to prevent chronic diseases, battle infectious disease outbreaks, prevent injuries and improve health, and work closely with provinces and territories to strengthen public health and respond to health crises. It includes six satellite "collaborating centres" to provide focal points for research. B.C. received two centres; one focuses on environmental health, the other on Aboriginal health.

BC is now also currently redefining and strengthening its *Public Health Act*, which will define core public health programs available to all British Columbians. Core programs are being determined through a detailed consultation process, and will fall in to three broad categories: health improvement programs, prevention programs, and environmental health programs. Elements for a core program will include more than just the ability to prevent disease and control health threats, but will also include reasonable evidence of a program's scientific evidence and cost-effectiveness and have indicators to measure its impact on health. BC's new *Public Health Act* is expected to be introduced in the spring of 2005.

THE PRICE OF INACTION

Few would argue that on an ethical basis alone, it is better to do what we can to prevent illness and keep people health then to simply wait until people suffer and get sick, regardless of the cost. However, for many people the most convincing rationale for greatly increasing our prevention efforts is that not only is it the right thing to do, but the cost savings and improved efficiencies would be substantial. Evidence is mounting that more focus on effective prevention is a critical part of the health care puzzle that will keep people out of our overcrowded hospital systems, reduce crisis care intervention, and create a healthier, more active and productive population.

Indeed, investing the time, energy and resources to achieve a modest 10 to 20 percent or greater across-the-board improvement in the major preventative illness and injuries will off set looming health care costs. A 10 to 20 percent improvement is a very achievable rate, according to witnesses. It would reduce the toll of human suffering, pain, disability and death. And it will play a critical role in making our health care system sustainable.

No Time to Lose: The Burden of Illness in B.C

As numerous witnesses before the Committee stressed, there are a number of converging factors and trends that show the urgent need to act now. These include a rapidly aging population, increase chronic diseases, decreasing levels of physical activity, increasing obesity, ongoing tobacco-induced illness, a huge toll from preventable injuries, and increasing rates of diabetes. A chart summarizing the estimated direct and indirect costs of these risk factors for disease and disability appears on page 17.

Aging population: Both the number and percentage of elderly people in our population is growing rapidly. The first baby boomers will begin to turn 65 in 2011. By 2030, 23 percent of British Columbians will be 65 or older. The incidence of chronic diseases increases with age and therefore the prevalence of chronic disease in the population will greatly increase, particularly between 2010 and 2030. This threatens to overwhelm the health care system unless actions are taken to address the risk factors that greatly contribute to the rate of chronic disease: diet, exercise, obesity, and tobacco use.

> **Cost of Aging in BC:** Studies estimate that two-thirds of the health expenditures that occur during a lifetime are made after a person's 65th birthday, primarily from chronic disease that have taken 10 to 20 years or more to develop.[2]
>
> **Potential Savings:** Addressing the risk factors that lead to unhealthy aging could reduce the incidence and cost of chronic diseases, as outlined below.

Chronic disease: Six disease categories account for almost 80 percent of the burden of disease in B.C.: cancer, cardiovascular disease (heart disease, stroke), injuries, mental disorders, neurological disorders and chronic respiratory disease. Common risk factors underlie all these conditions: tobacco use, inactivity, poor nutrition, obesity, excessive alcohol

[2] Baxter, D. 2000

use, and illicit drug use. Cardiovascular disease is the biggest killer, causing 39 percent of all deaths in Canada each year. Cancer comes second, taking 29 percent of all lives.

Cost of Chronic Disease: direct medical costs in Canada[3]: $39 billion per year. Indirect productivity losses of illness and disability: $54.4 billion per year. Total: $93.4 billion in Canada. In B.C., costs are $9.3 billion per year, or one-tenth the national rate.

Potential Savings: A 10 percent reduction in the incidence of chronic disease could save $3.9 billion in direct medical costs per year in Canada, and $390 million per year in B.C.

Increasing rates of obesity: All Western societies are growing more obese and B.C. is no exception, although our rate of increase is less than in other parts of Canada and the U.S. The proportion of people in B.C. who are considered either overweight or obese varies depending on whether individuals report their weights themselves or whether a nurse or researcher directly measures individuals. Self reported rates in recent years have found about 40 to 44 percent of British Columbians are overweight or obese. However, the most recent survey[4], in which nurses measured subjects rather than relying on self-reported data, found that 37 percent of British Columbians are overweight and 18 percent obese, for a total of 55 percent. Excess weight is strongly related to numerous health problems including higher rates of cardiovascular disease, diabetes, gastrointestinal disease, arthritis and many cancers.

"This generation of children will be the first in history to have a shorter life span than their parents unless we do something about obesity."
-Bobbe Wood, Heart and Stroke Foundation

One of the most alarming findings is that the rate of obesity among BC children has more than doubled over the last two decades. The combined factors of diets that are too rich in calories and fat, increased soft drink consumption, more time spent on computers and watching television, and too little time spent being physically active, has created an epidemic of obesity among our children. The most recent B.C. study[5] found that 36 percent of boys and 25 percent of girls were either overweight or obese.

Cost of obesity in B.C.: Direct health care costs: $380 million per year[6]. Productivity losses: $350-$450 million. Obesity-related illness is on the rise and may soon overtake the costs of tobacco-related illness.

Potential Savings: A 10 percent increase in the number of British Columbians achieving healthy, stable weights could save $38 million per year in direct health savings alone[7].

Physical activity: BC has the most physically active population in the country, but still the rates are nothing to celebrate. Two Canada-wide surveys (the National Population Health Survey and the Canadian Community Health Survey) show that in 2000/01 just 26.9 percent of British Columbians were optimally physically active and 22 percent were

[3] Mirolla, M. 2004
[4] *BC Nutrition Survey*, Ministry of Health Services, 2004
[5] *Action Schools Evaluation*, McKay et al, 2004
[6] Colman, R. 2004
[7] *ibid*

moderately active. A full 51 percent were considered inactive or sedentary. A more recent BC-based survey[8] found that 61 percent of people in BC did no strenuous exercise — yet 80 percent felt they were active enough! Physical inactivity is considered a major risk factor for heart disease, stroke, type 2 diabetes, hypertension, colon cancer, breast cancer, osteoporosis, obesity, depression, anxiety and stress.

Costs of inactivity: Direct medical costs: $187 million per year[9]. Indirect costs through premature death and disability: $236 million. If just 5 percent of the cost of mental health is factored in, inactivity's impact on depression, anxiety and other mental illness adds a further $47 million to direct medical costs.

Potential Savings: A 10 percent reduction in the number of sedentary British Columbians would save an estimated $16.1 million per year in B.C.

Unintentional Injury: Each year some 424,000 British Columbians are injured. Of these, 27,000 are hospitalized, 9,000 are partially disabled and 1,500 die[10]. One in five deaths is in a young person under age 24, the leading cause of death in this age group. Three types of injuries — falls, motor vehicle crashes, and poisoning — made up 68 percent of total incidence of all injuries. Falls, particularly among the elderly, exceed all other causes of injury in both the number of people affected and the personal and society costs. As Dr. Robert Conn told the Committee, the vast majority of injuries have definable risk factors — such as car crashes after drinking and driving, or a fall after an elderly person is placed on a new prescription — that can be anticipated and prevented with the proper strategies and programs

"If we look at children between 1 and 20 and take every cause of death you have ever heard of and add them all together, we still have more children dying of injuries than everything else combined." - Dr. Robert Conn, SMART RISK Canada

Cost of unintentional injuries: direct health care costs: $852 million per year[11]. Falls alone: 51 percent, or $437 million. Falls among children and youth: $96 million. Indirect costs from productivity losses and premature death: $2.1 billion per year.

Potential savings: A 10 percent reduction in injuries would save $205 million in all costs and $85 million in direct medical costs.

Diabetes: A recent report by the B.C. Auditor General[12] notes that 5.1 percent of the B.C. population has diabetes. That number is expected to rise to 7.1 percent by 2010 due to the aging population and the increasing rates of obesity and inactivity. Some 85 to 90 percent of diabetes is type 2 diabetes. This occurs most often in people who are overweight or obese, particularly those who carry excess weight around their abdomen in an "apple" shape. People with diabetes have twice the mortality rate compared to others their same age and have two to four times the risk of heart disease and stroke. Diabetes is the most common cause of kidney failure. Currently 39 percent of all people on dialysis have diabetes, the largest risk

[8] *BC Nutrition Survey*, Ministry of Health Services, 2004
[9] Colman, R. and Walkers, S. 2004
[10] Cloutier, and Albert, 2001
[11] *ibid*
[12] Office of the Auditor General, 2004

group. Rates of blindness and limb amputation are also significantly higher among people with diabetes.

Costs of diabetes: $760 million each year for hospital, pharmaceutical and medical care. Costs to individuals managing their illness: $2,000 per year.

Potential Savings: A 10 percent reduction in the number of individuals going on to develop diabetes would reduce care costs by $75 million annually[13].

"It always pains me when people speak of our great 16 percent smoking rates because in the north we are looking at 27% to 30% in the Prince George region and much higher in Fort Nelson and the Nass Valley... That inequity gets buried... [Tobacco prevention] is still a really important fight."

- Dr. Lorna Medd, Medical Health Officer, Northern Health Authority

Tobacco Use: At just 16 percent of the adult population, B.C. has the lowest rates of smokers in Canada, and almost all of North America, except Utah. However, rates vary throughout the province. In some areas of the Northern Interior and North Coast, rates are 27 percent or higher. Despite huge gains, tobacco-related illness is still the most costly and preventable life-style related health problem in B.C. and Canada. Of all possible interventions to reduce illness and death in society, tobacco cessation is still the most cost-effective.

Tobacco use is associated with numerous health problems including many cancers, particularly lung, throat, tongue and bladder cancer, as well as heart disease, stroke, and respiratory diseases. Despite huge decreases in use over the last 50 years, a recent study[14] found tobacco use still takes some 5,700 British Columbians lives each year.

Costs of Tobacco: $525 million in direct health care costs and $904 million in productivity losses through premature death and disability[15].

Potential Savings: Reducing B.C.'s smoking rate from 16 percent to 12 percent (Utah's rate) would save about $160 million annually in direct medical costs and $270 million in economic productivity losses.

Tallying the total cost

No single sum that tells us how much we are spending and how much we would save with better preventive action. Many health issues are interwoven, as is the case with obesity, inactivity and diabetes, or tobacco use and chronic disease. One cannot simply add all the costs together to achieve a single sum, as costs could be tallied twice.

We do know, however, that preventable, non-communicable disease and illness is costing us hundreds of millions per year. The following table summaries the estimated spending, discussed above.

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[13] The Auditor General's report did not estimate potential cost savings — indeed the report argued that spending would have to increase today to avoid much greater increased costs in the future. However, from the Auditor General's figures one could roughly estimate the savings from a 10 percent reduction in incidence.

[14] Bridge, J. and Turpin, B. 2004

[15] Bridge and Turpin, 2004

Figure 1. Cost Summary Table

	Estimated Direct Health Costs (BC) per year	Estimated Indirect Costs (BC) per year	Estimate direct health savings with modest improvement
Chronic Disease	$3.9 billion	$5.4 billion	$390 million
Obesity	$380 million	$350-$450 million	$38 million
Physical Inactivity	$187 million	$236 million	$16.1 million
Injuries	$852 million	$2.1 billion	$85 million
Diabetes	$760 million	unavailable	$75 million

* With reduction of smoking rate from 16 percent to Utah's 12 percent

Diet and Nutrition in British Columbia: Key to Health

No cost estimates exist yet for the impact of poor diet and nutrition in B.C. However, a recent comprehensive study, the B.C. Nutrition Survey (BCNS), has clearly illustrated that most adult British Columbians are not getting the types of food and nutrients they need to maintain good health and obtain optimal body weight. Principal Investigator, Lisa Forster-Coull, a consultant on child health and nutrition for the Ministry of Health Services, presented the findings to the Committee on June, 22, 2004.

The study was the first nutrition survey in the B.C. since 1972. Some 1,820 people in the province aged 19 to 64 were interviewed in 1999 to obtain the most comprehensive information on eating habits, body weight and exercise. Sponsored by Health Canada and the B.C. Ministry of Health Services in partnership with the University of British Columbia, the study included 90 minute in-home interviews by trained public health nurses and nutritionists and included measuring the height, weight and waist circumference of all participants. The findings are therefore considered much more accurate than self-reported data, which tends to underestimate weight and over-estimate physical activity.

The findings:

- 44 percent of the participants had normal body mass index of 20 to 24.9 BMI. But a full 55 percent where either overweight (BMI 25-29.9) or obese (BMI > 30.) This is a substantial increase in objectively measured overweight and obesity, up from 44 percent in 1989.
- 25 percent of all calories consumed by the majority of participants came high calorie, low nutrient food – primarily from "junk food" such as chips, pop, and candy, jams, alcohol etc.
- The biggest increase in weight and obesity occurs between 19 and 50.
- 65 percent were not consuming the recommended five fruits and vegetables each day.
- 77 percent were not consuming the recommended servings of dairy products
- Many were not getting the necessary vitamins and minerals from their diets. The survey found inadequate intakes of folate, vitamins B6 and B12, vitamin C, magnesium, zinc and calcium.
- The vast majority was not consuming enough fibre.
- 25 percent were consuming more than 35 percent of their caloric intake from fat.

The good news was that most people were just one serving away from getting the recommended "Five a Day." With only a bit of effort, most British Columbians can meet recommended levels of fruit and vegetable consumption.

> *"Some people say they are not sure they can eat that extra serving of fruits or vegetables, or have that extra glass of milk.... I challenge them and say: "Just cut back on that 25 percent of [junk food] calories."* – Lisa Forster-Coull

Costs Estimates for Children and Youth

The Committee was asked to specifically estimate the potential savings by focusing actions on children and youth. This is not an easy estimate to make. Ill health from lifestyle factors may take 40 to 50 years to develop and therefore the long time frame prevents accurate cost assessments. Few valid economic studies have been done on children and youth that accurately details costs and savings of these activities into the adult years.

However, a few promising cost-benefit analyses do show the potential in addressing preventive health in children:

- A Chicago-based pre-school and early elementary school program for low income children found that for every $1 invested in improving school readiness, literacy, and parental involvement in low income children, there was a $7.14 return to society at large.[16] Savings primarily occurred in reduced crime and juvenile delinquency, improved academic attainment, and reduced use of remedial services.
- The U.S. National Academies of Science, Institute of Medicine study[17] found that over the last two decades, obesity-related annual hospital costs for children and youth more than tripled between 1979 to 1999, rising from $US 35 million to $127 million annually.
- In the 2003 report *An Ounce of Prevention*, by B.C.'s Provincial Health Officer, Dr. Perry Kendall, noted that most risky behaviours and lifestyle choices begin in childhood and youth. Therefore, the figures in the preceding section outlining the potential cost savings could apply equally to interventions that begin in youth. Dr. Kendall notes that reaching children and youth in the "captive" school setting is one of the most effective ways to target both programs and funds.
- The European Commission[18] evaluated the cost-effectiveness of health promotion programs for behaviours that typically begin in adolescence. For example, studies show that if a youth has not tried smoking by age 19, there is almost no chance he or she will pick it up as a habit and become addicted. The EC report found that among youth:
    - o $1 on preventing tobacco saves $19 in treatment costs for the consequences of smoking.
    - o $1 spent on preventing alcohol and drug abuse can save $6 in costs for the consequences.
    - o $1 spent on education to prevent early and unprotected sex can save $5 treating the consequences.
    - o $1 spent on an integrated education program that deals with all major lifestyle risks, saves $14 dealing with the consequences.

As we will discuss in greater detail later in the report, early childhood development, particularly the quality of children's environment and interactions before age six, can greatly affect their emotional, physical and intellectual abilities, their schooling success, and even their life-long health and well being. BC researchers, particularly the work of Clyde

[16] Reynolds, AJ et al , 2003
[17] Institute of Medicine, 2004
[18] St. Leger, L et al, 2000

Hertzman and his research group, are leading the world in understanding the complex interplay of factors and how child health is influenced neighbourhood by neighbourhood.

"Savings" versus "Investment"

The potential savings from focusing more attention on the prevention of illness rather than waiting to treat the disease is striking. Some witnesses, however, urged us not to build the arguments for prevention on the cost savings case alone. Dr. John Millar, executive director of Population Health Services and Disease Control for the Provincial Health Services Authority, cautioned the Committee that because of the constant need for money in health care system, there is no such thing as absolute savings from preventive health as the money is absorbed by other needs. He noted, however, there is huge potential for greater efficiencies and effectiveness in how the money is spent. We can get, in essence, a better return for the money spent while reducing suffering.

Many witnesses noted that, instead of speaking in terms of costs savings, we should instead speak of necessary investments now to achieve health gains in the future. In fact, as a few witnesses pointed out, the action is very similar to making regular contributions to an RRSP.

> *"We need a commitment to prudent, strategic investment over a longer term... We don't expect to cash in our RRSP money next week or next year. We expect to see that money in a different time in our lives when we can us it and reap the benefit of it. We need to think in terms of that analogy of investing in health improvement."* - Prof. Michael Hayes, Simon Fraser University

Others urged that, ethically, the financial argument should be at least equal to the evidence that prevention actions improve population health and wellness.

> *"Financial savings are not the only benefit of improved health and fitness. Just as important are improvements in people's mental and physical states, in their productivity and in their general quality of life."* - Dr. Irving Rootman, University of Victoria

One of the dilemmas, however, in advocating increased investment is that some people feel that health care is already eating up too much government money and resent the fact that it is always dominating the agenda of government spending. However, many witnesses noted that well designed, effective investment in health promotion and prevention does not simply accrue to the health care ledger, but in fact creates economic benefit to all of society as a whole. It creates healthy, fit, high functioning people who help drive a dynamic, vital economy and it creates livable, healthy communities. It is this sort of investment that the Committee most heartily endorses. One example of this principle is the "Rails to Trails" developments in B.C. and other areas of North America: British Columbians benefit from walking, cycling and enjoying hundreds of kilometers of trails, tourists are drawn to the attraction, green corridors are maintained, and millions of dollars are generated in local and regional economies. (See box on page 21)

Investing in the "Full Ounce" of Prevention

As was noted in the introduction, B.C. is now spending $10.9 billion each year on health care delivery in the province, with the vast majority of it going to pay for the "sickness system" to treat and manage disease after it has arisen. It is estimated that less than 3 percent is going to prevention and public health programs. Nationally, that ratio also holds true. According to the National Advisory Committee on SARS and Public Health, (the "Naylor Report") of the $79.4 billion spent annually in Canada on health care, just 2 to 3 percent is allotted to public health activities of disease prevention, health promotion and health protection.

"The record of the last several decades is depressingly clear.... Governments have steadily committed virtually all new health spending to areas other than public health." - The Naylor Report

In short, since one ounce is one-sixteenth of a pound — or about six percent — for decades we have been routinely investing in about half an ounce of prevention — not even a full ounce. It is increasingly clear that the long-standing distortion between the spending on sickness care and investment in prevention needs to be addressed. There is good news, however, as the Naylor Report notes: "Because public health remains a very small part of total health spending, relatively modest investments could have a transformative impact."

In B.C., witnesses before the Committee urged government to invest in the "full ounce of prevention." That means spending on public health activities should gradually be increased from about 3 percent of total health spending to about 6 percent. In 2004 dollars, this would translate to a budget increase of approximately $375 million annually.

When attempting to shift funds from the acute care "sickness system" to more prevention programs, the complicating factor always emerges: *What do you stop funding in hospital and medical care right now in order to spend more on the prevention side for future improvements in health?* Such a decision is extraordinarily difficult for government and health administrators who are dealing with the daily economic crises in acute care. Diverting funds could mean that someone might die today in order to save the lives of hundreds of people in the future. This dilemma frequently stops the prevention investment being made. The B.C. Medical Association, in its presentation to the Committee urged government not to take money out of the already overburdened acute

Reducing adverse events

In health care, an adverse event (AE) is an unintended injury or complication that is caused by health care management rather than a patient's underlying disease. Some AEs are unavoidable, such as an unanticipated allergic reaction to a drug, but studies in the U.S. Britain and Australia estimate that at least 37 to 51 percent are preventable.

A recent comprehensive study (Baker et al, 2004) in Canada randomly pulled charts in a number of hospitals in five provinces and found that 7.5 percent of all hospital admissions (about 180,000 cases of 2.5 million admissions each year) have an AE that results in a longer hospital stay, disability or death. Of those, about 70,000, or about 40 percent, are preventable.

Witnesses before the Committee noted that reducing adverse events can greatly decrease suffering, reduce hospital costs and improve efficiency, leading to cost savings that can help fund other prevention activities. By focusing on comprehensive patient safety initiatives – such as putting in computerized prescription systems rather than hand-written notes – we can find the money in our existing health care budget to improve health without resorting to cost-cutting.

care system. *"Our acute care budget is already stretched to the limit."* stressed BCMA president Dr. Jack Burak.

However, B.C. is now at a fortunate crossroad. We have our first budget surplus in many years. Recently, the federal government also committed to providing an extra $5.4 billion over 10 years to BC for health funding. While much of this new money is already allotted to help fix acute care issues such as waiting lists for surgery, BC should earmark some of these new funds to enhance prevention services. Indeed, arguments can be made that a portion of all new funds and a portion of all future budgets surpluses should be devoted to catching up on our prevention investments.

Money for prevention can also come from improved efficiencies and patient outcomes in the acute care system. For example, recent studies show that many adverse events that occur in hospitals are preventable (see side bar previous page), affecting 180,000 people each year. Putting in place systems to reduce adverse events and enhance patient safety within the acute care system will lead to lower hospital and acute care costs, enabling those savings to be shifted to prevention initiatives.

In addition, wherever possible the Provincial Government should look for ways to leverage funds for health promotion and prevention activities from creative partnerships with other levels of government, non-government organizations, foundations and with private industry.

It is time to start investing in the full ounce of prevention.

RAILS TO TRAILS: Good for Health, Good for Communities, Good for the Economy

The conversion of abandoned rail grades to recreation corridors is a perfect example of investment strategies that improve health, enhance communities, and benefit the B.C. economy. British Columbia has hundreds of kilometers of abandoned rail grades throughout the province. In recent years, some of these have been converted to popular trails that provide places for cyclists, hikers, walkers, runners and others to access safe, gentle grade corridors for outdoor recreation or to actively commute to work. Wheelchair users, cross-country skiers, horseback riders, and in-line skaters also use the trails. They include:

- **Kettle Valley Railway Trail:** A 600-kilometre trail from Midway to Hope in B.C.'s Southern Interior. Used by more than 50,000 people each year, it generates an estimated $5 million annually to the Okanagan economy from tourist visits.
- **Galloping Goose and Lochside Trail:** Linking Victoria, Swartz Bay and Sooke, the two trails carry an estimated 5,000 users a day.
- **Spirit of 2010 Trails:** Funded by the federal and provincial government with contributions from four regional districts and Tourism BC, the recent $4.2 million upgrade of a rail trails network will link 18 communities. Some 700 km of existing rail corridors will be upgraded and converted, including sections of the Kettle Valley Railway, the Slocan Rail Trail and Salmo-Troupe Rail Trail in the Southern Interior, and the Cowichan Valley Rail Trail, which will eventually link to the Galloping Goose.

In the US, more than 18,000 kilometres of abandoned rail grades have been converted to 1,225 trails. US studies show multiple benefits. They promote physical exercise among all ages and abilities and draw tourists, fuelling the creation of B&Bs, restaurants, cafés and trail services, such as bike shops. Property values increase. Industrial or historic sites along the trail are cleaned up, preserved and enhanced. It costs about $6,000 to $25,000 a kilometre to convert a rail grade (for resurfacing, bridge decking, signage, access points etc.) but the return on the investment is high. US studies show each community along a Rail Trail nets at least $1.25 million annually to its local economy.

Don Forgard, vice president of business development for Tourism B.C., told the Committee that B.C. has potentially 2,000 kilometres of abandoned rail grades that could be converted throughout the province.

The Committee recommends the following:

Recommendation #2:

Funding for public health activities should gradually increase from about 3 percent of total health expenditure per annum to at least 6 percent per annum.

Recommendation #3:

A portion of all new health care funds received from federal/provincial negotiations should be earmarked for health investments that can be shown to prevent illness or improve the health of the population.

Recommendation #4:

Investments that promote healthy living, while also enhancing communities and strengthening the economy should be encouraged.

FINDING THE BEST PATH TO PREVENTION: WHAT WORKS?

The previous section laid out the costs of inaction and recommended increased investment in health promotion and prevention activities. But how should that money be spent? What kinds of investments do the most good? What programs or strategies are the most effective in bringing about a healthier population? In this section we review what is known about what works and what doesn't to improve people's health.

No Magic Bullet: Lessons of the Past 30 Years

As part of the Committee's Terms of Reference, we were asked specifically to find "effective strategies to change behaviour and encourage people to adopt lifelong health habits." That focus on changing individuals' behaviours has been prominent over the last 30 years of health promotion and prevention activities. We know that to improve their health and prevent disease, people need to stop smoking, eat a healthier diet, maintain a healthy weight, exercise regularly and drink responsibly. The initial thought was that if only people had the right information, the right lecturing tone, or the right scare tactic then they would see the light, change their ways, and adopt good habits. Such beliefs are still persistent, particularly among those who are new to the health promotion field or those who are occasional commentators, like newspaper columnists or editorial writers, who aren't aware of the lessons of the last 30 years.

Behaviours do not occur in a vacuum.

Determinants of Health

What has become obvious, after repeated attempts to change individual behaviors, is that despite all the knowledge in the world, individuals' behaviours don't change. That is because choices and behaviors do not occur in a vacuum. As numerous witnesses stressed to the Committee, the ability for individuals to obtain optimum health is influenced by the environments around them, their histories, genetics endowments, and personal skills, their education and income levels, the sense of control they have over their lives, the communities in which they live, the norms of their societies, and the ease in which a healthy choice is even possible. This multi-layered, complex interweaving of social, economic and personal factors is usually called the "determinants of health."

> *"There is no question that when it comes to helping people lead easier lives, we're interested in them adopting healthy behaviours, but we need to recognize that behaviour occurs within the context of social, political and economic systems....If you don't have access to healthy food, you can't choose it. If you don't have access to opportunities for physical activity, you can't choose it....So you can advertise to them, educate them, and market to them and so on, but it is actually changes to the social factors, policies and norms that are necessary for improvement and maintenance of population health. That is a key concept that underlies all of health promotion."* - Dr. Trevor Hancock, Ministry of Health Services.

Population Health

Canada has been a leader in this area, often called "population health promotion" for more than 30 years, beginning with the publication of a landmark federal report in 1974 under then-health minister Marc Lalonde called *A New Perspective on the Health of Canadians*. It was among the first to note that the health care system and medical care only played a small role in determining the health of an individual or the population as a whole. Dr. Irving Rootman, in giving the Committee a history of the growth of health promotion, noted the Lalonde Report had a world-wide impact but was only really adopted in Canada a few years later when others, such as the U.S. Surgeon General, acclaimed its foresight. However it soon spurred a rapid development of programs aimed at lifestyle modification and health education, such as ParticipAction.

The Ottawa Charter

A second document, which came out of an international meeting of the World Health Organization held in Canada in 1986, further refined the complexities of health promotion. Called The Ottawa Charter, it identified five key strategies for improving health and quality of life:

- Building healthy public policy;
- Creating supportive community environments;
- Strengthening community action;
- Developing personal skills; and
- Reorienting health services towards a more preventive focus.

The Ottawa Charter defined health promotion as a process of *enabling* people to exert control over the determinants of health to improve their health. Since that time, the understanding of what actually enables people has grown in sophistication and complexity. As many witnesses stressed to the Committee, evidence clearly indicates that the most effective programs are those that take a comprehensive approach that uses all five of the Ottawa strategies.

Evidence for Effectiveness

A consensus exists about the established criteria for actions that will successfully improve the health of both individuals and populations. Dr. Rootman noted the independent and respected U.S. Institute of Medicine (IOM), which advises the US government on health policy, for example, has identified[19] five key elements for effective preventive programs:

- Interventions must address the fundamental behavioural and social causes of disease, illness and disability.
- Multiple approaches must be used simultaneously - education, social and community support, laws, economic incentives and disincentives.

Successful strategies have long durations, multiple levels of intervention, and often need policies and actions that lie outside the traditional domain of health

[19] Institute of Medicine, 2000

- Multiple levels of influence must be accessed: individuals, families, schools, workplaces, communities, nations.
- Interventions must recognize the special needs of specific target risk groups such as teens, seniors, ethnic groups or at-risk communities.
- Interventions must have long durations because change takes time and needs to be constantly supported for each subsequent generation.
- Interventions need to involve a variety of sectors that are not traditionally associated with "health", such as business, engineering, law, media and others.

The Four E's

Others have taken the same principles and themes and altered them slightly. Public health officials often use the phrase "The Four E's" to describe the multi-faceted interventions needed to sustain improvements in health. The Four E's are:

- **Education:** campaigns that give populations and individuals the facts about specific health issues or behaviours, stressing the harms and the actions needed to avoid them. The education process must be multi-faceted, ongoing, and creative. It must use multiple settings, multiple variations of the message, and multiple avenues of communication - such as media, schools, and government campaigns.
- **Environmental supports:** (Sometimes also called "Engineering") are design and social developments that support behavioral change. They might include nicotine patches, drug treatments, or cessation programs for tobacco use; comfortable, effective seatbelts or helmets to help injury reduction; vending machines stocked with healthy choices of food; pedometers used to measure daily activity; bike lanes or trails to promote cycling or walking. Some actions, like pedometers or Canada's use of graphic pictures on cigarette packs, straddle both education and environmental support. (See sidebar)
- **Economic levers:** are financial incentives and disincentives to discourage an unhealthy behavior. Raising taxes, such as on tobacco, can discourage use. Removing taxes or providing tax deductions from other items, like sporting activities or exercise equipment, can encourage

Motivation in 10,000 clicks

A device, called a **pedometer**, is proving to be a highly effective environmental support that motivates users to become more physically active.

Looking like a small pager, the electronic step counter is fastened to a waistband, belt, or hip pocket and every stride the wearer makes is then tallied.

A minimum 10,000 steps a day is needed to maintain good health and control weight. To lose pounds, wearers should try for 12,000 steps or more.

"Most adults take about 5,300 steps a day," said Lara Lauzon, University of Victoria professor of physical education who uses pedometers to educate people about their daily activity levels and motivate them to get 10,000 steps a day.

The Committee heard stories of individuals whose years of yo-yo dieting finally stopped when pedometers gave them tangible evidence of their daily activity. They also discourage mindless snacking, since wearers become highly aware that every calorie means another 20 steps to burn it off.

A few pilot programs in BC schools are using pedometers to motivate children to be more active and are especially helpful for overweight, unathletic children who find walking is an enjoyable activity at which they can succeed, Lauzon said.

The Committee was loaned pedometers for a three-month trial and members found them a motivating, easy to use device.

See page 44 for a recommendation on pedometers.

their use. Fines, tolls or other levies act as disincentives for unhealthy or risky actions, while rebates, price cuts, subsidies can support healthy actions and choices. Economic disincentives have been used very effectively to discourage tobacco use.

- **Enforcement:** involves implementing legislation such as banning smoking in workplaces and public spaces, imposing age restrictions for cigarette purchases, and introducing helmet and seatbelt laws. It is usually the final step that comes after the groundwork has been done by the activities under the three other "Es". Generally, for legislation to work, wide public support is needed. If most people know about the issue and support actions to address it, they will think the law is a sensible and reasonable way to ensure people adopt the behavior (such as buckling a seatbelt). Then enforcement will be confined to the small numbers who do not adopt it.

Right Settings

Target people where they live, work, learn, and play

Certain settings, such as communities, schools and workplaces offer unique and practical opportunities to address underlying factors that contribute to good health. These are the places where people spend most of their lives — where they live, work, learn and play — and as such provide the locales to target education, environmental supports and other multi-level strategies to improve health and wellness. They provide the venues to reach individuals and families and to create the climate that enables the healthy choice to be made.

Healthy Communities

As the Ottawa Charter aptly notes, communities have a key role in promoting good health. Successful health promotion activities create supportive community environments and strengthen community action to address their own leading health issues. The qualities, resources, social connectedness and other attributes of local neighborhoods in BC can have a direct impact on the health of its residents. As we will note later in this report, BC researchers are conducting landmark research that clearly shows the qualities of our communities have a direct bearing on the health and development of even young children, enhancing or undermining key measures of early childhood development.[20]

What makes a community healthy?

Healthy communities have a number of key qualities. As outlined by the Ontario Healthy Communities Coalition, the qualities include:

- clean and safe physical environments
- peace, equity and social justice
- adequate access to food, clean water, shelter, income, safety, work and recreation for all
- strong, mutually-supportive relationships and networks, also called "high levels of social capital." (See sidebar next page.)
- wide participation of residents in decision-making

[20] See page 54 for a greater discussion of Early Childhood Development and BC's unique study of neighborhood contribution

- opportunities for learning and skill development
- strong local cultural and spiritual heritage
- diverse and robust economy
- strong civic engagement
- access to health services, including public health and preventive programs
- protection of the natural environment

Healthy communities are also marked by embracing the key principle that people cannot achieve their fullest potential unless they themselves are able to take control themselves of the factors that determine their well-being. As well, in a healthy community, a wide cross-section of businesses, institutions, organizations, and individuals share their knowledge, expertise and perspectives and work together to address shared issues.

Fundamental to a process of creating a health community is that communities are responsible for addressing their own priorities. Witness Dr. Trevor Hancock, a founder of the world-wide healthy communities movement, noted that the actions needed to make a community healthier will differ for each community and it is up to the community to decide. Some may decide to focus on providing cleaner and safer environments, others may want to work on increasing social capital through more open and welcoming governance, others may want to work on providing better recreation opportunities, bike trails for commuters, or sidewalks in subdivisions.

Declining social capital – and what we can do about it

Social capital has been described as the bonds of fellowship and civic engagement that people have with their communities and the quality of the relationships and networks within that community. It is measured by such things as the rates of volunteering, membership in clubs, churches and community organizations, civic voter turnout, number of people who sign petitions, perceived levels of trust, – even the number of people who sit on their front porch on a summer's evening.

In recent years, studies have found that cities and communities with lower levels of social capital have higher mortality rates and worse health status.

In a landmark book, *Bowling Alone: The Collapse and Revival of the American Community*, Harvard political scientist Robert Putnum explored declining social capital and increasing civic apathy and individual isolation in the US since the 1960s. Putnum blames television and the car – particularly long commutes and suburban sprawl – for fuelling the increasing disconnection among people.

In a subsequent book, *Better Together*, he and civic activist Lewis Feldstein describe 12 inspiring case histories of community action in which people rebuilt connections to solve specific communities problems. A corresponding website, www.bettertogether.org, hosted by the Harvard's Kennedy School of Government lists a number of other community initiatives. As well it lists, 150 things – little and big – that people can do to build social capital. It includes: attend town meetings, vote, meet your neighbours, sing in a choir, use public transit, volunteer, shop locally, use the park, turn off the TV or computer and sit on your front stairs.

Make communities stronger, not weaker

The Committee is very concerned that initiatives do not make communities weaker as an unintended effect. Research shows that efforts to address specific community issues and to improve quality of life are more effective when community members are engaged in the process and take collective ownership of programs or initiatives, rather than being forced to adopt a program or agenda imposed by others. As we discuss later in section 4 on lessons learned from tobacco control, this principle of ownership may explain why communities in Northern BC mounted a huge backlash against a WCB initiative to prohibit exposure to second hand smoke in all workplaces, especially bars and restaurants in B.C., despite overwhelming "expert" evidence it was the right action to take. While some communities in the south were ready to adopt the ban — indeed some municipalities had already put such a

ban in place — in other communities it was not yet an issue that they had adopted as their own.

The Committee notes that for any program or initiative to improve the health of British Columbians, there is a fundamental need to engage the community and build stronger communities based on consensual rather than coercive relationships.

Learning from Ontario and Quebec

Lessons from Ontario and Quebec's Healthy Communities movements are illuminating. BC, Ontario and Quebec all initiated Healthy Community Initiatives at the same time when federal seed money became available during the late 1980s. When funding dried up in the mid 1990s, BC's movement largely withered and died, although individual communities continue to adopt health promoting policies and individually launch their own programs, such as good food box programs.

"We have a program called a "Good Food Box" in which people put in $10 every month... That money is pooled to buy massive amounts of fruit and vegetables ... Volunteers fill the food boxes and help with distribution.. and that $10 turns into about $20 of healthy food. It is feeding a lot of people in the Cowichan Valley ... Communities can do amazing things with a small amount of money." Laurie Williams, B.C Coalition for Health Promotion

Ontario and Quebec, however, set up different models. Then and now, the organizations are at arms-length from government. They help coordinate the actions and help communities build the skills and ability to address their own priorities now and into the future — often described by the term "capacity building." In Ontario the organization is a non-profit charity called the Ontario Healthy Communities Coalition; in Quebec it is called Villes et Villages en Sante, and is part of the Institute of Public Health. Both organizations have flourished over the last decade. Both organizations have a number of things in common:

- Both organizations depend on provincial government funding, but the arms-length nature means the provincial government does not dictate the programs and the funding is stable.
- Both organizations are based on the membership of communities, who also form the basis of the board of directors. In both organizations, provincial governments do not have members on the boards.
- Neither organization provides direct funding to communities, but instead provides a wide range of education, training and support to enable the communities themselves to strengthen their social, environmental and economic well-being. In Ontario, for example, two thirds of the organization's staff are regionally-located community "animators" who are typically invited by a local community government or organization to come in to support, resource, or guide a process in which the community is addressing an issue themselves.
- Both organizations rely on close collaboration and partnerships with other organizations and networks that have shared interests - pooling resources and skills to achieve common goals.

Made in B.C. model

Witnesses before the Committee noted repeatedly that BC communities want to develop their own solutions, based on their own priorities, to improve the health of their populations. One of the problems in BC is that currently there is no dedicated source of funding, or expertise, or overseeing entity for these community-based activities.

A number of witnesses before the Committee suggested B.C. revive its Healthy Communities initiatives but this time adopt a model that has the attributes of the Ontario and Quebec models.

The Union of B.C. Municipalities has also given vocal support to the creation of an arms-length foundation to provide seed funding and help animate healthy community initiatives. The UBCM is unique in Canada in that both rural and urban communities are represented; it is a powerful, vital organization. At the September 2004 UBCM annual meeting, members debated the need for an independent body to enable community-based health promotion. They passed a resolution to petition the government of British Columbia to support, through legislation, the establishment of an independent Health Promotion Foundation in B.C. The organization also passed a resolution to petition for sustainable funding for the foundation with an annual provincial contribution that would amount to $1 per person per year, or the equivalent of $4.077 million in 2003. The UBCM suggested that this money come from the Medical Service Plan Premiums.

The Committee supports the concept of an independent, arms length foundation and suggests that this is further explored with the UBCM about who should establish and run such foundation and how it could be funded. The Committee rejects, however, the request that the funding come from MSP premiums — this money is needed by the acute care system. Neither does the Committee support raising MSP premiums, even by a modest amount, to create new funds for the foundation as the public has already had a relatively recent increase in MSP costs. The Committee notes that the best funding model could be one in which the foundation is able to raise funds from many sources, such as donations and bequests. It is also important the model support the establishment of partnerships in which a number of people bring money to the table to embark on healthy community initiatives. One model of funding could be like the Canada-BC infrastructure program in which each level of government supplies a portion of the funding.

Recommendation #5:

The Committee recommends that an independent, arms-length health promotion foundation be established to facilitate community-based health promotion.

- **Enter into discussions with the UBCM about possible models to achieve that purpose.**
- **Explore through discussions with the UBCM models of stable funding**

Healthy Schools

Schools are an ideal setting for teaching children and youth about healthy choices, for modeling behavior and for providing a supportive environment in when the healthy choice for children can be made an easier choice.

As Provincial Health Officer Dr. Perry Kendall notes, the knowledge, attitudes and behaviours established in childhood and youth have a direct impact — both good and bad — on the behaviours and circumstances in individuals' later lives. Healthy children who know about good choices create healthy adults.

BC children spend six hours a day, Monday to Friday, as "captive" audiences in our schools, Kendall notes. Therefore the years from kindergarten until Grade 12 create a perfect environment to target effective health promotion strategies, to establish and to provide opportunities for physical exercise and sport. An added bonus is that children often become effective message carriers into the entire family, carrying home information about the need for healthy diets, smoking cessation and physical activity that helps influence change in their parents, grandparents and siblings.

Dr. Kendall notes in an October 2003 Report, *An Ounce of Prevention: A Public Health Rationale for the School as a Setting for Health Promotion*, that in recent years a broad consensus has developed about the types, frequency and dose of school based interventions that will positively influence youth health. However, B.C., as well as most Canadian provinces and U.S. jurisdictions, "has in the past failed to take universal advantage of this body of knowledge and the opportunities a captive school-age audience presents." Kendall called for focused strategy, starting in the school setting, that would promote healthy nutrition and increased levels of physical activity.

In the year since Dr. Kendall's report, progress has been achieved in this area in BC and across Canada. Some controversial recommendations that the Committee made in 2001 — such as banning junk food and soft drinks from school vending machines — are no longer seen as controversial.

- **Healthy food:** At least one third of a child's diet is consumed at school. The Premier, in a November 6 speech to the Liberal Party, noted that Education Minister Tom Christensen will be working with school boards over the next year to eliminate junk food in vending machines in public schools in British Columbia and replace it with healthy food choices. Premier Campbell has committed that within the next four years all junk food in schools will be gone. This follows on an Ontario announcement to ban chocolate bars, chips, sugary drinks and candy in school vending machines. These will be replaced by healthier choices such as milk, yogurt, cheese, muffins, pretzels, popcorn, water and fruit juice. Some BC schools have already gone this route voluntarily and despite fears that this action may harm schools' abilities to raise funds for programs, early reports are that the healthy choices bring in just as much money, or more, than junk food sales in vending machines. The Committee welcomes these advances and encourages their more wide-scale adoption, ideally through a cooperative, consultative process.

- **ActionSchools:** Recent surveys show 40 percent of BC children are not meeting minimum health guidelines for physical activity. Now a unique BC pilot program to integrate physical activity throughout the school day, not just in gym time, has achieved very positive initial results and is now being rolled out across the province. (see side bar)

- **Recommitment to "Healthy Schools" Initiative:** In the early 1990s, BC had a "Healthy Schools" program, that like the Healthy Communities program, was a top-down initiative in which individual schools applied for separate grants for up to six different program areas. Some schools with a high level of need, however, received no funding because their needs did not mesh with the funded programs. In 2003, the Ministry of Children and Family changed the approach. Now part of a program called CommunityLINK (Learning Includes Nutrition and Knowledge) grants are given to school districts based on its number of children; then the schools, districts and communities decide how and where to spend the money based on need. Just one part of the CommunityLINK process, Healthy Schools, is a student-driven process in which the students follow a five step plan to make their school a healthier place. Students start by creating a shared vision of a healthy school, then pick one or two ideas to pursue. They develop a plan, put the plan in place, and then evaluate the outcome. The process teaches students about shared decision-making and gives them skills to put ideas into action.

- **Fruit in the schools:** The Committee learned from witness Brent Warner, from B.C.'s Ministry of Agriculture, Food and Fisheries, that a pilot project is in development in Kelowna to provide an Okanagan apple every day to children in the local school system.

Ready, Set, ActionSchools!

A unique program in BC is weaving physical activity throughout the school day and showing students and teachers the joy, and health and mental benefits, of frequent, regular movement.

Called ActionSchools!, the program began as a pilot project in 10 Lower Mainland elementary schools between Feb 2003 and June 2004. Seven schools received help to design individual action plans, specific to each school, to help increase childrens' activity throughout the day. Three schools were used as controls to compare results after a year.

Children in Grades 4,5, and 6 were targeted. Classroom activities included such things as jumping 12 times every time the school bell rang, putting on hip-hop music and dancing for one minute, doing five minutes of chair aerobics and then getting back to work. Dr. Heather McKay, of the University of B.C., who led the research side of the project, told the Committee that some teachers were initially worried that the bursts of activity would disrupt teaching, break the children's focus and prove hard to settle them back down to learn – but all were surprises. The activity improved attention and focus throughout the day! *"On days I didn't do it, the kids were just off the wall...they couldn't concentrate as much,"* one teacher reported. Recess and lunchtime programs were also designed and promoted.

Results found that children in the program got an average of 48 more minutes a day of physical activity than controls and improved their aerobic performance, their fitness and their bone health. Academic learning scores improved. Parents reported that their children were happier and healthier.

ActionsSchools! is now being rolled out across the province and plans are to extend it to younger and older grades. McKay estimated that for each school it costs about $2,400 to design and implement a specific, individualized action plan and work with teachers and schools to ensure it meets their needs.

To date, the program has received significant support for 2010LegaciesNow, an arm of the Olympic organizing efforts.

The Committee applauds this creative, unique B.C. program and supports its widescale deployment throughout the province. This sort of program could create a much greater legacy than simply gold medals: a whole generation of BC children who embrace and enjoy physical activity and weave it into their day.

This pilot program is similar to a new program in Britain that provides a free piece of fruit every day to 2 million school children. BC's pilot, called Partners in Healthy Eating, is a partnership between the Ministry of Health Services and the Ministry of Agriculture. Its goal is to eventually put a piece of B.C. fruit or vegetable in every child's lunch in the province. Not only will children get a fresh piece of fruit, but research shows that food that is consumed close to the place it was grown retains more nutrients.

- **Creative use of school space:** Premier Campbell announced in November that he had asked Education Minister Tom Christensen to work with school advocates in the community to explore ways to use under-utilized school space for other activities that promote wellness in the community — such as youth drop-in, community courses, senior centres, early childhood programs, after school activities run by outside groups. This would make BC schools the heart of life-long-learning centres in their neighborhoods rather then places just used by students between 9 a.m. and 3 p.m. each weekday. It could also build social capital and connectedness in the community. The Ontario government is already undertaking this action as part of its healthier schools plan and has provided $20 million to school boards to help them open up schools to non-profit community groups for use after hours and year-round, such as allowing a local karate school, Boys and Girls Club, dance instructor, or art teacher to use the school facilities to provide a program after school or in the evening, providing increased opportunities for students and other members of the community to stay active or develop more skills.

These developments in BC and other jurisdictions show encouraging developments towards maximizing the settings of our schools as vehicles for health promotion, to model healthy choices and behaviors, and to create an environment and policies where the health of BC's children and their families will be improved.

The Committee recommends:

Recommendation #6:

That the government continue to work towards creating a coordinated, comprehensive, and multi-stakeholder strategy to maximize the school setting for health promotion activities.

Recommendation #7:

That adequate funding, promotion and support be given to ensure BC's unique and ground-breaking ActionSchools! program be successfully adopted and sustained. throughout the province.

Recommendation #8:

That efforts continue to replace unhealthy foods in BC schools with healthier choices.

Recommendation #9:

That "Fruit in the Schools Program" to provide BC children with fresh BC produce be ully explored and supported.

Recommendation #10:

That creative, multi-use strategies be explored to use BC schools after school hours as centres for life-long learning for children and others in the community.

Healthy Workplaces

Most BC adults spend a good portion of their waking life on the job. And for many British Columbians that means a stressful, hectic day that often finds them sitting at a desk, tied to a computer, or otherwise engaged in sedentary work. The time pressures and stress of personal life and career often make BC workers too tired and busy to exercise, even after work hours. Lunch is often snatched at a desk, or from a selection of unhealthy choices in a cafeteria or vending machine. For some, the nature of their job puts them at increased risk of injuries, such as repetitive strain, back injuries, or falls. For others the pressures of the job itself create health concerns. A recent study[21] by Ontario researchers for the Public Health Agency of Canada found that downsizing, long hours and unrealistic demands at some workplaces are creating unhealthy workloads that in turn put extra burden on the health care system. The study found that employees who report feeling being overworked seek medical attention more frequently than those who report a manageable balance between their work life and personal responsibilities.

All these factors make the workplace another ideal setting for reaching a ready — and needy — audience with health promotion messages, creative health improvement programs, and supportive environments for healthy choices. The workplace, rather than promoting stress and ill health, can give a major impetus to adopt health habits. In fact, widescale adoption of workplace bans of smoking in the 1980s were a significant factor in reducing smoking rates and compelling people to quit. When the workplace no longer supported it, people had to begin to butt out.

Over the last three decades a number of farsighted companies have introduced workplace wellness programs. A Canadian leader is Canadian Life Assurance, which in 1978 was one of the first

"We've been working hard to change the foods available....so that when you're working late and you go to the vending machines you're not faced with just a bag of chips and a bottle of pop to get you through the briefing note you are working on ... We've been successful in putting in healthy choices.. and, as important, ensuring they are the same or less costly than the unhealthy choices." – Lisa Forster-Coull, nutritionist, Ministry of Health

Stairways to Health

Taking the stairs rather than an elevator burns five times as many calories and promotes muscle strength and aerobic fitness. BC's Ministry of Health Services, as part of a larger program to promote workplace wellness, has put in place a "Stairway to Health" Program. It turned a dingy, dark stairwell in its 7--story Victoria's headquarters into an attractive atmosphere by applying a fresh paint and better lightning, hanging appealing, bright paintings by local artists and posting encouraging and humourous messages on notice boards on some landings. In addition messages have been posted by the elevators to remind people to take the stairs. The result has been that stair use in the ministry has greatly increased. "We've had remarkable engagement by our whole ministry staff," Dr. Penny Ballem, deputy minister of health, told the committee.

[21] Higgins, C and Duxbury, L. 2004

corporations to introduce a fitness and wellness program. Studies of the program have found that employees who participated had reduced absenteeism, increased productivity, reduced employee turnover, and improved morale. In addition, over 10 years, participants had reduced cardiovascular risk and improved fitness levels. Canada Life estimated that every $1 invested in the wellness program returned $6.85 in benefits to the company in reduce health-claim costs and increased productivity.

A number of BC companies have been very active in this field, including VanCity Savings, BC Hydro and Telus. The Vancouver Airport Authority introduced a workplace health program in 2001 that combined physical, social and psychological goals of wellness. It found the program led to a reduction in cost from health care-related benefits, a reduction in absenteeism, increased productivity and reduced turnover. However, many companies and employers have yet to take on meaningful initiatives in the workplace. This is where the B.C. government can become a model. A number of ministries provide access to fitness facilities and better food choices in their cafeterias and vending machines. Noting that even the most motivated employee however, can feel too busy to take time to exercise, some employers are providing encouragement to integrate activity throughout the workday, such as the Ministry of Health's Stairway to Health Program. (See sidebar previous page). Under the Ministry's Division Of Population Health and Wellness other physical activity and nutritional programs have been launched, such as distributing pedometers to employees so they could measure their daily rates of activity and aim to log 10,000 steps a day. The Ministry is also working with other government ministry to help them establish wellness programs.

Health Canada outlines the following key factors that influence health in the workplace:

- The physical environment: a healthy, well-designed and safe place to work
- The psychosocial environment: a "culture" that supports employee well-being and effective work practices
- Personal resources: employees having control over their work and health, being able to cope with stress and knowing that there is support available when needed
- Personal health practices: opportunities to make healthy lifestyle choices that support long term health and well-being.

Dr. Analee Yassi, the Director of the Institute of Health Promotion Research and a BC expert in workplace wellness, told the Committee that traditionally work place health promotion and occupational health and safety were two separate entities in most workplaces. The first was concerned with individual behaviour issues such as fitness, nutrition, smoking cessation, while the later focused on organization-wide systems issues, such as injury prevention and workplace safety regulations. . Over the last decade, Yassi noted the approach to workplace health and wellenss has changed quite dramatically with the recognition (just like in other areas of successful health promotion) that the most effective programs combine a comprehensive, multi-level approach that links individual level initiatives aimed to change behaviours with organizational level issues and culture. Therefore, just like successful approaches in the community and in schools, workplace programs need to be very participatory, be seen to be relevant to all those concerned, include input from employees as well as management, and have a sustained commitment from all for a long duration.

Dr. Yassi's personal area of interest and expertise is in promoting health among health care workers. She told the Committee that health care workers, despite spending all their work life caring for others, have among highest rates of workplace injury, illness and time loss due. In 1998, the injury rate among health care workers was 54 percent higher than the rate for all other workers in the province. In response, health care unions and employers came together to create the unique-to-BC Occupational Health and Safety Agency for Health Care (OHSAH). Now heralded internationally, OHSAH is a prime example of how employers and unions — even in often-fractious BC — can work together to create a comprehensive, systematic program, she notes. OHSAH focuses on preventing injuries before they happen through training, education and environmental support (such as proper use and placement of bed lifts) and then following up, if and when an injury occurs, to find out how it happened and how it can be prevented in the future. Dr. Yassi notes that OHSAH's work encapsulates all the dimensions of effective health promotion — multi-level, comprehensive initiatives that span education, environment support, engineering, have economic incentives (such as reduce claim costs to employers) and receive wide-level buy-in from employees up to senior managers.

The Committee is encouraged that some employers are working with their employees to introduce comprehensive and innovative programs to improve workplace health and wellness across B.C. However, more can be done. While this is an issue largely for private business and industry, the government does have an important role to play by being a model for workplace wellness and leading the province in the adoption of comprehensive programs. In addition, the government can provide links to information and other successful programs so that B.C. industries and corporations can better see the advantages of adopting wellness initiatives.

The Committee recommends:

Recommendation #11:

As the employer of more than 25,000 people in the province, the government of BC should act as a model for comprehensive, workplace wellness initiatives.

Recommendation #12:

The government should encourage B.C. business and industry through information sharing to adopt similar wellness programs.

PUTTING IT ALL TOGETHER: LESSONS FROM TOBACCO CONTROL

In the previous section we outlined what we have learned about successful health promotion over the last three decades, what works and what doesn't. These principles, as numerous witnesses before the Committee noted, have all come together to prevent tobacco use. Tobacco prevention is a textbook example of coordinated, long term, comprehensive and multifaceted intervention, that spanned provincial policies, community environments, school-based education, workplace initiatives, economic levers, legislation and individual behaviour change that was supported over a very long time.

"Twenty five years ago there would have been ashtrays on these desks ... It has been 25 years of long hard work by many, many people, but the social norm has shifted" – Dr. Trevor Hancock

Forty years ago in B.C., as in most of the western world, at least 50 per of all adults smoked. Gradually, and with a tremendous amount of sustained effort, that rate came down — year-by-year, strategy-by-strategy — to our current 16 percent. With continued action and effort, it could decrease even further.

Tobacco prevention has very effectively used the Four E's. For years, education and social marketing campaigns, many of them highly creative, have continually stressed the message that smoking is harmful. Much of it was aimed at susceptible target groups like children and teenagers in school settings. But that alone was not enough. Environmental supports like nicotine patches and cessation programs helped give people the tools to quit. Putting cigarettes behind the counter and prohibiting sales to youth added more pressure. Economic levers, particularly continued high rates of taxation and fines have encouraged even more people to butt out or never start, particularly teens who are very sensitive to price changes. Finally, enforcement of "no smoking areas" in various locales — from people's homes, to airplanes, to work places, and to public buildings — made finding places to smoke increasingly difficult.

Wider adoption of municipal smoking bans at the community level, particularly in bars and restaurants, has lately spurred the sharpest decline in smoking numbers. New Brunswick and Manitoba have just adopted provincial legislation enforcing bans in all public buildings. Saskatchewan will follow by January 1, 2005, having recently tabled legislation banning smoking in all bars, restaurants, private clubs, bingo halls and casinos. Research shows that such legislation may be the action that best helps the smokers who have the most difficulty quitting. A Canadian Journal of Public Health study found that 36 percent of people who quit smoking cited bylaws as the prime motivation for quitting. The researchers also found that smokers who tried to quit were three times more successful when a ban was in place, as they found it easier to abstain from smoking. As we noted in the section on healthy communities, smoking bans in all bars and

Studies show bans in public places encourage the most smokers to quit and helps them abstain

restaurants in B.C. is still controversial, in part because in some communities it is seen as being imposed from outside sources.

Canada is seen as a leader in the world for tobacco prevention. This is due in large part to the banning of smoking in public spaces as well as the adoption of highly graphic pictures of cancerous tissues on all Canadian cigarette packages. The United Kingdom is studying the impact of Canada's cigarette package program to see if it will follow Canada's lead, although the disturbing images are still highly controversial in England.

Tobacco Goals Yet To Achieve

Despite our success, B.C. must continue to target smoking reduction. The fight is not over. More communities should consider banning smoking in all public buildings, particularly bars and restaurants. This action, if initiated by communities and municipalities themselves, could be a very fruitful source of further smoking reduction. This move is most important to protect restaurant and bar workers, who must inhale secondhand smoke throughout their shifts and risk harm by tobacco's hundreds of toxic elements. All areas of B.C. need to use the growing body of evidence of effective programs and actions — particularly the successful combination of the Four E's — to continue to reduce this No. 1 preventable cause of illness and death in B.C.

Recommendation #13:

The Committee recommends that anti-tobacco efforts continue to receive full support, particularly comprehensive, multifaceted efforts combining education, environmental support, economic disincentives and the enforcement of anti-tobacco legislation.

The B.C. College of Pharmacists asked the Committee to support province-wide legislation banning the sale of tobacco products in all B.C. pharmacies. Five other Canadian provinces, including Quebec and Ontario, have already brought in such legislation. Studies in those locales show the earnings of the retail outlets did not suffer and the ban removed the tempting wall of cigarette cartons facing customers filling prescriptions for smoking cessation aids.

It's never too late to quit – and help is available

Of B.C.'s 500,000 smokers, most say they want to quit. According to the US. Surgeon General, health benefits begin immediately when someone stops smoking. Even long-term smokers over the age of 65 can improve their health. However, smoking addiction is perhaps the most powerful addiction to beat. The following are some resources to help:

- **Family doctors:** Can provide counseling, prescriptions for cessation mediations, and long-term follow up.
- **BC Smokers' Help Line:** Funded by the Ministry of Health Services and operated by the Canadian Cancer Society, the line has trained cessation counselors who can offer information, advice, support and referral. Access and support can occur over long durations, not just a single call. 1-877-2233.
- **Quit Now Website:** An new BC interactive website, first launched in the US. Now funded in BC and hosted by the Lung Association of B.C. provides tips and an Internet community to support people trying to quit. www.quitnow.ca
- **Kick the Nic:** A high school program aimed at teens, it emphasizes peer support and skill building in a program completed over 10 sessions.

The B.C. College of Pharmacists argues that pharmacists are health care providers, and pharmacies are an essential part of the health care system. As such, they say it is hypocritical for them to be selling the product responsible for the greatest number of preventable illnesses in B.C. As Dr. Perry Kendall noted in his presentation, "If there was a product on the market that caused 95 percent of all breast cancers, it wouldn't last two weeks on store shelves." Pharmacists are also examining the creation of a "Pharmacists Quit Smoking Program" that would be a counseling service for smokers wanting to quit. The pharmacists says this program would be undermined by the presence of tobacco products in the stores.

Ideally, pharmacy chains and owners should voluntarily remove tobacco products without government intervention

The Committee debated at length whether it was the role of the provincial government to now step in to legislate the removal of tobacco products from pharmacy outlets. All Committee members felt that, ideally, pharmacy retail chains and individual store owners should voluntarily remove tobacco products themselves without government intervention. It is safe to say that the majority of the non-smoking and even smoking population of B.C. would support it and view it as a positive public relations move. Some Committee members felt very strongly that now was the time for government to act to force the removal of tobacco from pharmacy shelves since after almost a decade of requests, B.C. retail pharmacies had not removed them voluntarily. Either amending the Tobacco Retailer's Act or the Pharmacists Act could achieve the removal, and both routes have their pros and cons. The majority of Committee members, however, rejected legislating the removal and rather encouraged the College, the pharmacists and the general public to continue to lobby pharmacy chains for the voluntary removal of tobacco products.

The Committee was also concerned that some B.C. high schools still have smoking pits. While buying cigarettes is illegal for those under 19, and while all schools promote smoking cessation and encourage students never to start smoking, some high schools still allow students to smoke on a designated part of school grounds. This policy varies from school board to school board in the province and some school districts have made all school facilities and grounds smoke free. Those who still allow smoking in a designated area despite anti-tobacco messages acknowledge a dilemma: either they provide students with a safe and monitored place to smoke or the students will go off school property, creating a littering and loitering problem around a neighboring property and creating unacceptable fire risks. Some Committee members felt that if the school ground was not able to become smoke free, a potential action would be to have schools bring in a policy that, as minors, all students smoking on school grounds must have a signed permission slip from parents allowing them to do so. Many students would not obtain this permission and numbers using the pits could decline.=

Recommendation #14:

The Committee recommends that B.C. school districts continue their anti-smoking efforts among B.C. students, including continuing efforts to remove smoking pits from school grounds or to reduce their use.

BLAZING A NEW PATH: ADDRESSING DIET, INACTIVITY AND OBESITY

The triple threats of poor diet, inactivity and obesity have been causing increasing concern in recent years around the globe. Each component is inextricably linked, yet in its own right, is worthy of attention:

- **Poor Diet:** Poor nutrition, lack of intake of essential nutrients or too much fats, sugars and calories in peoples' diets can inhibit healthy growth, impair thinking and body processes, suppress immunity, and increase risk factors for heart disease and cancer. Excess intake of energy (too many calories consumed) leads to weight gain and eventually obesity, but individuals can suffer the health effects of poor diet and not be obese.

- **Inactivity:** Lack of physical exercise can cause multiple health concerns such as: impaired cardiovascular system, causing poorer heart and lung function, reduced oxygen exchange, higher blood pressure, reduced elasticity of arteries; lowering the metabolic rate, increasing body fat, harming glucose disposal and cell insulin sensitivity; weakened muscle, bones and joints causing poorer balance, strength, endurance and independence; increasing mental health problems such as depression and anxiety; and increasing some cancers by lowering immunity and slowing some body process. Exercise burns calories and enhances body functioning allowing individuals who have adequate levels of physical activity to tolerate a higher fat, higher calorie diet without weight gain and with lower rates of chronic disease.

Obesity will soon replace tobacco as the number one preventable killer

- **Obesity:** While obesity is caused primarily by an imbalance between diet (energy in) and hysical activity (energy out), it is also strongly related to societal, economic, environmental and cultural factors. The presence of obesity augments health concerns over and above the impacts each of poor diet and inactivity on their own. Those with a BMI (body mass index — calculated by weight in kilograms divided by height in metres) of 25 or higher have higher rates of diabetes, heart disease, stroke, many cancers, gallbladder disease, arthritis, back problems, mobility problems and activity limitations. The concerns of rising rates of obesity is so great that many witnesses told the Committee that obesity will soon overtake tobacco as the leading cause of preventable illness and chronic disease in BC and the world. Rapidly increasing rates of obesity among children worldwide is causing extreme alarm, witnesses before the Committee noted.

In the last few years, many international and national organizations, government committees, top-level panels, media organizations and others have released in depth reports examining the epidemic of obesity, its causes, and what we must do to curtail it. The World Health Organization, called the epidemic of obesity "one of the greatest neglected public health problems of our time" and blamed the fundamental cause on sedentary lifestyle combined with high-fat, energy-dense diets.[22] In September of 2004, the U.S. Institute of Medicine released a special report[23] on the alarming increase in childhood obesity and urged

[22] WHO, 1997
[23] Koplan et al, 2004

immediate coordinated action by families, schools, communities, industry and government to improve opportunities for children to engage in physical activity and eat a healthy diet.

Why Are We Becoming So Fat?

The root causes behind the explosion of poor diets, declining physical activity, and rapid weight gain are highly complex and interwoven, but some key profound social and cultural changes have come together over the last 30 to 40 years and have been accelerating over the last decade. These are:

"We are at a perilous point in our history.... We are going to be burying our kids. It's the first time in history and it is a staggering state of affairs." Dr. Rick Bell, director, Coalition for Active Living

- **The dominance of the car:** Cities and neighborhoods have been planned around the car. Even if just for short trips, most people do their shopping, errands and commuting to work by car. Children are driven to school, even if they live only a few blocks away. Suburban sprawl, large distances between services, and lack of sidewalks promote driving, rather than walking.
- **Television, computers and video games:** Rather than running around outside, more and more children spend their leisure time sitting at computer or watching TV, interacting with friends via instant text messaging rather than with a skipping rope or ball and glove. Professor Lara Lauzon told the Committee that studies have found by the time a child graduates from high school he or she will have spent 15,000 to 18,000 hours in front of a television but only 12,000 hours in school. Adults, too spend the vast majority of their leisure time watching TV. E-mail means even at the office, colleagues are more apt to sit at the desk and write a quick note rather than walk 100 steps for a face-to-face discussion. Together with the car, these developments mean children and adults can be sedentary for weeks at a time, never breaking a sweat or raising their heart rate.
- **Perceptions of safety:** Crime rates have been falling for the last decade, but the decline in social capital and the increased feeling of disconnection people feel within their communities (perhaps precipitated by the car and the television) means that people are much less likely to send their children out into the neighborhood to play, to allow their children to walk to school unaccompanied, to play in the neighborhood park, or even to spend time out of doors themselves. Children's activities and play dates are much more likely to be pre-organized rather than impromptu play.

"Fifty-five percent of children we measured in Vancouver and the Lower Mainland had one or more risk factors for cardiovascular disease already present at age 10... We shouldn't be seeing any..." - Dr. Heather McKay, UBC professor, lead researcher ActionSchools

- **Changes to family life:** A huge increase two working parents leading, hectic, stressed lives has impacted home life. Few have time to plan and produce a well- balanced, sit down dinner. Family dinners are now rushed affairs as everyone arrives home and amid the chaos pulls a dinner together. In addition, a growing number of families headed

by single parents has increased the workload on a single adult trying to get a meal on the table. The result is an increasing reliance on pre-packaged, convenience food, drive-thru menus or restaurant meals.

- **Unhealthy fast food:** Unfortunately, that convenience, pre-packaged food or restaurant foods grabbed on the way home by stressed families tends to be high in fat (especially saturated animal fat and trans fats) and high in salt and calories while being low in nutrients and low in fruits and vegetables. Every calorie consumed takes 20 steps to burn off. At 495 calories, for example, a Big Mac takes 9,900 steps to walk off.

One Big Mac takes 9,900 steps to burn off

- **Portion sizes:** Not only are people consuming more convenience foods, but the sizes and number of calories in each item has greatly increased over the last three decades. Witnesses before the Committee showed graphic illustrations of how portion sizes and calories have doubled or tripled since the 1950s. (See sidebar.)

Super-size world
Witnesses told the Committee about ballooning sizes of fast food items. The following are some of the changes in commonly ordered portion size since the 1970s.

Hamburger
Then: 161 g; Now: 198 g

Pop
Then: 250 ml; Now: 464 ml

Movie Popcorn
Then: 500 ml; Now: 1250 mls

French Fries
Then: 72g; Now: 205g

Excess liquid calories, in the form of pop, lattes, frappucinos and other popular drinks, don't tend to quell appetites but help pack on the pounds. Depending on the brand, one 355 ml can of pop has between 9 to 12 teaspoons of sugar. Some people drink more than 500ml of pop in a single sitting.

- **"Thrifty Gene":** An increasingly accepted theory, first posed by US geneticist James Neel in 1963, is that evolution has set us up for obesity problems. The hypothesis is that our prehistoric ancestors needed to efficiently store fat to survive famine; those who survived passed on their genes. Now in an age of abundance that "thrifty gene," (or more likely, set of genes) is a drawback. The thrifty gene hypothesis has been gaining increasing credence in recent years by human genome research and has been used to explain why Aboriginal cultures, new to stable, abundant processed food, tend to rapidly develop high rates of diabetes within 50 to 100 years of contact.[24]

How to combat the crisis?

Unlike tobacco-related illness, which has a relatively simple straightforward cure — don't smoke! — combating the epidemic of obesity, poor diet and inactivity is much more complex. It is more difficult, from a public health perspective to address the complex weaving of societal factors listed above that are fuelling the epidemic. As numerous witnesses before the Committee noted, one cannot simply tell people not to eat. Our daily intake of food is essential. Nutritional messages are complicated by the vast array of food sources and choices, ethnic diets and personal preferences.

Encouraging physical activity, in an age of stressed and overworked population who are unwilling to send their children out the door to play, is also challenging. Many surveys show that most adults know

Physical activity must be engineered back into our lives

[24] Chakravarthy et al. 2004

they should be more physically active but the problem always comes down to time: they don't know how to work it into their already packed days. "Physical activity has to be engineered back into our lives," witness Dr. Rick Bell, of the Coalition for Active Living, told the Committee.

Adding to the problem is that, unlike tobacco, no 30-year history of effective programs to improve diet and activity exists. No one country or jurisdiction has a ground-breaking program or intervention, a compelling success story of how they combated the crisis, that the rest of us can follow as a model to improve diet, get people active and get obesity rates under control. Instead, almost all Western nations are now struggling to come up with solutions and are embarking on multi-dimensional strategies, attempting to use the principles laid out in Section 3, (Finding the Best Path: What Works) of this report. Britain and Australia have recently embarked on ambitious programs, some of the details of which are provided here. For the most part the success of these programs have not yet been evaluated. We do not know yet whether any of it will work — results may take years — but we all know that we must try.

Looking to Britain

Since January 2004, Britain has embarked on a multi-level, multifaceted strategy at the national level to combat poor diet, inactivity and obesity.[25] The strategy includes:

- A comprehensive **Food and Health Action Plan**, lead by Department of Health but working across all government ministries. It is overseen by an interministerial cabinet committee to ensure that all ministries are involved, not just health. Phase 1 in the spring was national consultation to establish priorities; Phase 2, now underway, is putting priorities into action.
- **Activity Coordination Team**, led by Department of Health and the Department of Culture, Media and Sport, is an interministerial, cross-government action plan to increase mass participation in physical activity.

Under these two umbrellas actions the following initiatives are now underway:

- Reforms of the welfare food scheme so that all children in poverty have access to healthy diets.
- Launch of a "5 a Day" program to promote eating five fruits and vegetables each day. This includes a National Fruit Scheme, which is underway to provide a free piece of fruit every day to 2 million school children. In concert with produce growers and suppliers, a national "5 a Day" logo is being placed on all fruit and vegetables.
- Launch of a "Food in Schools" program. Eight pilot projects, now underway in hundreds of schools, focus on one or more of the following: providing healthier options in breakfast clubs, tuck shops, vending machines, and lunches from home; improving the environment of school cafeterias; starting cooking clubs or educational "growing clubs;" providing and promoting increased water consumption rather than pop.

[25] See http://www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/HealthyLiving/

- New guidelines and regulations are being drafted between the government food standards agency and the food industry to address the amount of salt, fats and added sugar in processed foods. This process has not gone entirely smoothly. In September 2004 a very public squabble erupted between the government and grocery chains over the time frame the government was demanding for the reduction in salt levels in grocery chains' processed food.
- Nationwide promotion of breastfeeding.
- Creation of Local Exercise Action Pilots (LEAP), which entails 10 locally-run programs overseen by primary care trusts (a collection of doctors and health care providers, rather like a British model of Health Maintenance Organization or local health authority) to test and evaluate new ways of encouraging people to take up exercise. The pilots include the creation of local walking clubs.
- Provision of 10,000 pedometers to the 10 primary care trusts (PCT) involved in the LEAP program to use and evaluate as motivational tool to encourage walking.
- A new contract has been established with general practitioners requiring them to offer relevant health promotion advice to patients. Also, for the first time, physicians working in primary care trusts can write a prescription for an obese or overweight patient to attend either Weight Watchers or Slimming World, which will be covered by the National Health Service (coming out of the PCT's existing budget — the NHS has not increased funding for the change.) Many patients cannot afford these weight control services but research is showing it is more cost-effective for primary care trust to send obese patients to these programs than to treat the medical cost of obesity.
- Investment of more than $1 billion over three years to revamp physical education and school sport to triple the percentage of children getting a minimum of 2 hours a week on high quality activity by 2006.
- By September 2005, school sport partnerships will be set up local business and industry to help enhance sports activity in some 16,000 schools, or 75 percent of all government schools.
- The establishment of some 350 "Healthy Living Centres" with lottery funds in poor communities to provide community-based programs. These are primarily focused on providing classes and skills training, such as exercise and cooking classes, computer instruction, well-baby clinics, drug and alcohol counseling etc.
- The New Opportunities Fund and Sport England are investing $400 million in the construction of new sport and exercise facilities across Britain.

- Britain is exploring banning food ads to children and adding Canada's graphic images to cigarette packs but has not yet decided on these initiatives.

Looking to Australia

For at least the last six years, Australia has been embarking on a number of different projects, some at the national level and some at the state level, to address obesity, inactivity and poor diet. Since the state-level is the most equivalent to B.C.'s provincial level, a few key projects at this level are highlighted here.

New South Wales: Highly similar to B.C. in population size, age and ethnic distribution, the level of obesity and inactivity and the geographic challenges of having a mix of highly populated urban centres combined with remote, dispersed rural populations, the NSW approach is illuminating:

- Between 1998-2002, NSW launched a program called, *Simply Active Every Day*, to promote physical activity. It had 64 objectives, which included establishing a wide range of programs, services, educational campaigns and collaborations with industry, private partners and non-profit organizations. An evaluation[26] at the end of the four years found that 54 of the 64 objectives were met ***BUT*** adults did not become more active. Surveys of the adult population found that the initiative greatly increased their knowledge and intention — they wanted to exercise — but it did not increase the actual rates of activity. In fact, during the time frame of the program the percentage of adults who were inactive increased, but evaluators noted that the rate of increase was less than in other areas of Australia over the same time period that did not have the program. This has been interpreted as evidence of successful program — it slowed the inexorable trend.
- NSW has now launched an ***Action Plan for the Prevention of Obesity in Children and Young People 2003-2007***.[27] The strategy is to focus on schools, communities, parents, daycares, research programs, and partnerships with the private sector to target initiatives to children and youth, rather than adults whose habits are already ingrained. The action plan calls such things as mandatory school "canteen" menus, promotion of school sports, creation of bike and walking paths to provide safe routes to schools, teacher training, educational support to parents about controlling obesity, promotion of breastfeeding, an on-line physical activity training program, a state-wide health survey of 8,000 children age 5 to 16 including blood pressure monitoring and blood sampling, and

Universal Rx: Walking

Studies, particularly from the U.S. and Australia, have found that walking is the one physical activity most people felt they could integrate into their day – if their community supports it. Sidewalks, zoning, urban density, locations of school and shopping, and other urban design issues all have a bearing on how walkable a community is. In the U.S., the Partnership for a Walkable America is composed of national governmental agencies and non-profit organizations working to improve the conditions for walking and to increase the number of Americans who walk regularly. Their website has an interactive checklist to help determine how walkable a community is, such as how safe the routes are, how drivers behave, how easy it is to cross the road and whether the walking is pleasant. See www.walkableamerica.org

Another US website, Walkable Communities Inc. www.walkable.org rates Victoria as the leading walkable city in North America, and also praises Vancouver.

[26] See: www.health.nsw.gov.au/pubs/2004/simplyactive.html

[27] See: www.health.nsw.gov.au/obesity

broad stakeholder forums with business, non-profit groups and others to spur them to take action.

Western Australia: In an attempt to get people to be more active, the state launched a pilot program called "Find 30 — It's no big exercise" which aimed to break down the perceived barriers to exercise through wide scale media promotion that stressed integrating short spurts throughout the day — walking, taking stairs, parking farther away in the shopping mall — to add up to 30 minutes. Public opinion surveys showed the message was well understood and the public very receptive, particularly about integrating walking to their day, but no results exists about actual outcomes.

Enhanced role for Australian doctors
Across Australia, the Australia national government has enhanced the ability for the medical profession to deal with obesity and life style issues. These developments include:

- Creation of clinical practice protocols for obesity management and treatment in children and adults. These are evidence-based guidelines that provide medically-sound advice to general practitioners about how to treat their obese patients. British Columbia has a very successful clinical protocols program, with more than 50 established guidelines, but does not yet have a protocol for obesity.
- Establishment of a medical fee (called rebates in Australia) for treating obesity. Doctors who follow the guidelines can receive payment for the service. Under B.C.'s fee-for-service arrangement doctors do not have a billing code item that would allow them to bill the Medical Services Plan for lifestyle, prevention or obesity counselling. That means that while most doctors may tell a patient they need to lose weight, they generally do not provide comprehensive help, advice or strategies for patients to lose weight. The B.C. Medical Association, in its presentation to the Committee, suggested that this area should be considered in future negotiations with doctors over fee schedules and payment

Promoting walking through pedometer programs
Studies show that walking is a safe and healthy physical activity that practically everyone can do. Even the elderly show significant health improvements from walking. Many people who are unable to find the time or energy for more intensive exercise do find they can work more walking into their day.

A number of jurisdictions and private companies have given out free pedometers or subsidized their costs to promote walking. The state of Colorado has distributed thousands of them in various promotions. Australia has had pilot projects in some communities. Kellogg's Cereals in Canada inserted 600,000 in specially marked boxes of two cereals, which rapidly sold out. Macdonalds Restaurants also had free pedometer promotion. Britain is now conducting pilot projects featuring the distribution of free pedometers. A pilot project is now underway in North Saanich schools giving children pedometers. The cost/benefit of providing free pedometers or subsidizing their cost has not yet been evaluated and not all pedometers are accurate and reliable, but they hold promise as a simple, inexpensive device that can get people moving. [See accuracy ratings of popular brands at www.pedometers.com/reviews]

Recommendation # 15:

Given that walking 10,000 steps a day is an established way to maintain a healthy weight, the Committee recommends that the government promote walking and explore methods to enable interested British Columbians to obtain accurate and reliable pedometers. Options could include rebates, bulk purchase or other incentives to make pedometer use more widely available and to promote British Columbians to "take steps" to become more active.

arrangements "to enable family doctors in particular to make clinical preventive counseling a regular part of their practice."

- Australia has created "Lifestyle Scripts," which is a prescription (called a "script" in Australia) of printed advice that doctors hand out instead of pills. The electronically-based information has practical, specific tips and actions that the doctor can customize and "prescribe" to help patients lose weight, lower cholesterol, become more physically active or alter other risky behaviours. The Australian federal government has spent US$4 billion on the program but it has not yet been evaluated.

Looking to Canada

While examining the recent actions in other countries is enlightening, it should be noted that on the International scene, others look to Canada for ideas and inspiration, and within Canada, B.C itself is deemed a leader — especially for our rates of non-smokers, our longest life span, our most physically active population, and our best health status. Indeed, Canada for years has been considered a world leader in health promotion and illness prevention — despite the acknowledgement that there is much more that we can and need to do. A highly influential report to the European Commission on the evidence of health promotion effectiveness over the last 30 years[28] presented an entire chapter on Canada's history of health promotion — the only country profiled.

The EC report focused particularly on Canada's lead in creating relevant infrastructure, such as Health Canada's Health Promotion Directorate, its lead in promoting healthy public policy (legislation and government policies that transcend health but create the social and economic conditions to improve health) and its founding of the Healthy Cities/ Communities movement that has now taken off world wide, if now somewhat weakened in places like B.C. It also noted that Canada has had an international lead in population health promotion research and has academic researchers of the highest calibre. Some of Canada's leading name researchers are based in B.C. and many appeared before the committee.

The presence of stellar individuals in the province who are doing ground breaking work and creating innovative programs, such as ActionSchools!, gives irrefutable evidence that BC has a rich resource in its human capital that can bring world-leading health promotion work to fruition in B.C. Dr. Irving Rootman noted, however, that now people tend to work in their own little groups and that no coordinating forum exists to lead province-wide initiatives or to "facilitate the collaboration of the excellent individuals and groups in B.C." Rootman suggested the model of New Zealand's Health Promotion Forum, which has representation from communities, researchers, health professionals, business, and health organizations that can promote collaborations on common issues.

Other witnesses stressed the need for some sort of overarching coordinating, strategic body and provide suggestions for models. In particular it was noted by some witnesses the creation of large health authorities has reduced the links between public health and local communities and schools. One model that was suggested was to expand the mandate of the BC Centre for Disease Control to become the coordinating body for public health activities. The BCCDC is world renowned for its control of epidemics and its handling of issues like SARS and avian flu. It works closely with the Provincial Health Officer. It already does all the communicable

[28] International Union for Health Promotion and Education, 1999

disease prevention in the province, is under the umbrella of the Provincial Health Services Association, and is linked with all the health authorities across the province. The BCCDC is also the hub for the two new satellite collaborating centres created by the new Canadian Public Health Agency. That new agency has been given the mandate to also control non-communicable, chronic disease across Canada. Therefore the BCCDC could be the natural spot to place the coordination and implementation of these activities.

Ultimately, however, the Committee is not able to assess the value of competing models, but recognizes that such a function may be needed. The Ministry of Health Services should further explore the best model. Any design must be tailored to the B.C. environment and have the following attributes: it would not duplicate actions or existing authorities; not build new empires or institutions but rather transcend and link existing bodies; and be highly cost-effective and efficient.

Recommendation #16:

The Committee recommends that the Ministry of Health Services explore models to create a cost-effective and efficient body or forum to coordinate public health activities and foster collaboration across B.C., particularly for the prevention of chronic disease.

Exciting Olympic Collaborative Model Now Underway

Dynamic new partnership can reach many British Columbians with strategies to increase fitness and nutritious diet by 2010

Fortunately dynamic new partnerships and collaborations are occurring in B.C. The Committee learned that a very inspiring and potentially fruitful collaboration, is already underway in the province. In early June 2004, a three-part presentation was given before the Committee. It consisted of Dr. Perry Kendall, the Provincial Health Officer (PHO), the BC Healthy Living Alliance, and the 2010 LegaciesNow organization. Calling themselves Healthy BC 2010, together they presented a comprehensive vision of coordinated, coherent program with diverse partners that span government, non-government and community organizations. This burgeoning partnership is unique in Canada and has the ability to reach a wide array of British Columbians to improve their health — particularly focused on physical activity, diet and obesity — that will capitalize on the spirit of the 2010 Olympics and strive to make BC the healthiest jurisdiction to every host an Olympic games.

Dr. Kendall first provided evidence of the heavy burden of preventable diseases that are afflicting British Columbians and why we need to act now to reduce their occurrence. Most of this evidence has already been provided in this document, but its summary bears repeating: the most common and costly health problems facing Canadians are the most potentially preventable. The same risk factors underlie many of them: tobacco use, inactivity, unhealthy diets, obesity, and irresponsible use alcohol, particularly drinking during pregnancy or being drunk while driving. Dr. Kendall then presented evidence of what works to reduce unhealthy behavior, improve population health, and change cultural norms, using tobacco control as part of the illustration. The evidence has been presented in considerable detail in section 3 and 4 of this report.

Bobbe Wood, the CEO of the Heart and Stroke Foundation of B.C. and the Yukon, and Janice Macdonald, the regional executive director of the Dietitians of Canada, both spoke on behalf of the B.C. Healthy Living Alliance. The BCHLA is a new group, formed in February 2003, to bring together disparate organizations who share common messages and goals to help coordinate their actions and strengthen their advocacy by working together. The alliance's coordinating committee includes the presenters' organizations as well as the Canadian Cancer Society, the Canadian Diabetes Association, the B.C. Lung Association, the B.C. Pubic Health Association and the B.C. College of Family Physicians. In addition, some community based organizations, including the B.C. Recreation and Parks Association as well as the Union of B.C. Municipalities are also part of the founding group; more members have joined in the last year and the organization is seeking even more representation, such as from Aboriginal communities. So far they now have a network of some 25,000 people, many of them volunteers, who are dispersed throughout the province. As such the BCHLA is a ready-made, community-based network that has the capacity to reach millions of British Columbians throughout the province. Rather than focus on a single disease or one risk behavior — as has been typical practice in the past — together the groups can take an integrated approach to reducing the common factors underlying disease.

The BCHLA's goals are to reduce the burden of chronic disease in B.C. by:

- Enhancing collaboration among government, non-government and private sector organizations;
- Advocating for health promoting policies, environments, programs and services; and
- Increasing the capacity of communities to create and sustain health-promoting policies, environments, programs and services.

The BCHLA has begun working on common programs and is prepared to take on more efforts as a coordinating platform for specific strategies. Such opportunity exists now by collaborating with the large network of community committees set up to help support the 2010 Olympics.

Marion Lay, president and CEO of 2010 LegaciesNow, was the final presenter. She gave a detailed history of the agency, which began as an initiative of the Provincial Government and the Vancouver 2010 Bid Corporation to strengthen and build sport opportunities and sport development networks in B.C. communities. In the three years prior to the successful bid, it launched a number of

Fostering Interministerial Collaboration

Preventing illness and promoting health is not the work of the health ministry alone. Many key measures that make people healthy citizens come from other jurisdictions, or in collaboration across jurisdictions. Crossing boundaries in government can be difficult. This problem arose in the past with Drinking Water Protection, and the solution there was to create a structure of interministerial committees to foster collaboration. This model might be considered for health promotion and prevention. It includes:

- The Assistant Deputy Ministers Coordinating Committee, with representatives from all ministries to formulate high-level government policy
- The Directors' Committee on Drinking Water, to turn government policies into actions and programs
- The Drinking Water Leadership Council, which serves as single point of contact between the regional health authorities and the Ministries of Health Services and Water, Land and Air Protection

Recommendation #17:

The Committee recommends this interministerial model be explored for its application to health promotion activities.

innovative programs and events that motivated young athletes, created sport infrastructure and sporting opportunities, funded activities like "ActionSchools!" and were instrumental in building BC enthusiasm and support that helped secure the 2010 Olympic Games.

Now 2010 LegaciesNow is working in partnership with a board sector of community-based organizations — volunteer groups, sports clubs, arts and cultural organizations and more — to create a legacy of physical activity, recreation opportunities, sport development, arts promotion, literacy and volunteerism that will take root prior to the Olympics and flourish well beyond the games. Now more than 85 "Spirit of 2010 Community Committees" have been created around the province. These committees usually have membership from municipal offices, Chamber of Commerce, schools, service organizations like Rotary Clubs, regional health authorities, community centres, parks and recreation, and sports clubs. In short, this is a powerful, multi-dimensional network of community-based organizations who can be used to help build on the spirit of 2010 and disseminate strategies that can help motivate British Columbians to get moving, eat a healthier diet and control their weight through a healthy balance of diet and exercise.

The Committee applauds this unique collaboration between the Government, the PHO, the BCHLA, and 2010 LegaciesNow and gives it a hearty endorsement. The unprecedented network can be used as a coordinating platform to build community capacity to promote healthier, more active populations and healthier community environments. It can help coordinate and promote collaborative work across a wide range of ministries so that efforts are not duplicated and it can then see that those programs are efficiently distributed throughout B.C. The Committee anticipates that as the 2010 Olympics get closer there will be a natural tendency for the event organizers and the Government to want to narrow the focus so that the prime concern is ensuring that venue construction and event logistics proceed without a hitch, on time, and on budget. This, of course, is important for BC's reputation and standing with the world. And yet, what is equally important for the people of the province is that the Olympic legacy creates healthier and more robust communities and enables our children and society to flourish. For that reason, it is important that 2010 LegaciesNow and the collaboration receive long-term government support.

Recommendation #18:

The Committee recommends that the Provincial Government work across all its ministries and, in collaboration with outside partners, develop a comprehensive, multi-level strategy using effective education, environmental support, economic levers and incentives, and even legislation to promote physical activity and healthy diets and to combat obesity in British Columbia.

Recommendation #19:

The Committee recommends that the Healthy BC 2010 strategy receive full Government support and be used as a coordinating platform for these health promotion activities, particularly programs leading up to the 2010 Olympics.

OTHER ROUTES TO ENHANCE PREVENTION AND IMPROVE HEALTH

During the course of the Committee's hearings, a number of witnesses provided compelling evidence and suggestions to reduce the toll of preventable health problems and improve the health of the population beyond the typical areas of tobacco control, diet, physical activity, and obesity. The other avenues for prevention efforts include injury prevention, chronic disease management, early childhood development, and creation of a province-wide 211 telephone service to link people to a wide range of services to help address the social determinants of health.

Injury Prevention

Every hour of every day in the province, 48 British Columbians are injured. Each day 31 people die or are permanently disabled from unintentional injuries — with falls, motor vehicle crashes and poisonings the top three causes. More children and youth die of injuries than all other causes combined. But as witnesses told the Committee, these numbers are just the tip of the iceberg. For every death, 45 people are hospitalized, 1,300 are treated in emergency departments or doctor's offices and still more are patched up at home or never seek treatment. The direct medical cost is staggering, about $852 million each year. Combined with lost productivity and societal costs it comes to $2.1 billion per year in B.C. alone. Yet the vast majority of these injuries can be prevented, witnesses told the Committee.

Stark reality creates injury champion

Robert Conn, a B.C.-born and trained doctor, was a rising international heart surgeon specializing in pediatric heart transplants when a stark truth struck. "It is embarrassing .... but I'd never actually stopped to think where the donors were coming from. I'd always been focused on the miracle of transplantation." A stint on the transplant harvest team brought reality home: the donors had all been vital, healthy individuals one moment, and from an injury, brain dead the next.

Dr. Conn put down his scalpel for good when in one pivotal month at Toronto's Hospital for Sick Children he harvest three hearts in a row from young children who had drowned in the family swimming pool.

"I turned my surgical career down... I realized I could do more good," said Dr. Conn, who in 1992 founded SMARTRISK, a leading foundation dedicated to systematic research, programs, government policies, and advocacy to reduce the toll of preventable injuries.

Despite its terrible toll, comprehensive injury prevention is a young science that has had very little coordinated and sustained focus over the years and very little resources devoted to it. That needs to change, witnesses said. Part of the problem is that society tends to call unintentional injuries "accidents", suggesting that these are unavoidable acts of fate or bad luck and there is little that can be done about them. Injury prevention specialists now never use the term accident because they know the vast majority are predictable events that have a number of identifiable risk factors — such as falls among the elderly, car crashes among teens, and drowning and poisoning among young children. The same principles of the four E's — education, environmental (engineering) support, economic levers and enforcement (of government legislation) discussed in section 3 apply equally effectively to injury prevention, the witnesses stressed.

Some progress is being made. The Provincial Health Office, working with partners such as the BC Injury Research and Prevention Unit (BCIRPU) has produced a comprehensive report on the prevention of falls in the elderly, with evidence-based strategies and original data on medications use and falls in B.C. This report is now being used to guide a process of falls prevention in the province.

Don't fall: sit and count to 10

Some injury prevention strategies are very simple and inexpensive. Elderly individuals sometimes fall when getting up in the middle of the night to use the washroom. Rising too quickly from bed, they take a few steps, become dizzy and fall. New medications can make the dizziness even more pronounced. Dr. Conn notes there is a simple solution: sit on the edge of the bed and count to 10 before walking. This advice is especially important when doctors prescribe a new medication, particularly diuretics and other drugs to combat high blood pressure.

BCIRPU, founded in 1997, is a unique resource. Located at B.C. Children's & Women's Health Centre it has been conducting research, collecting data and evaluating programs to help reduce the impact of unintentional injuries in B.C. Its mission is to understand and reduce the societal and economic burden of injuries in B.C., in particularly by addressing the risks of specific populations such as seniors, youth and the Aboriginal population. It coordinates research and prevention strategies, conducts its own injury research and disseminates evidence-based injury research from other groups. However, work is hampered by the lack a systematic process of data collection about injuries. Unlike cancer or heart disease or other leading illnesses, we do not have a method of standardized information collection that tells us clearly who is dying of injuries, what kind of injury it was, how it happened and why.

Dr. Ian Pike, the director of BCIRPU, and Dr. Robert Conn, of SMARTRISK, both urged the Committee to back improved information gathering. The lack of detailed, standardized surveillance and data collection hampers efforts to provide good prevention programs. Hospitals emergency rooms often don't collect information about what caused an injury — all they can say is that someone was hurt. A good standardized surveillance system is needed.

For three years the B.C. Injury Research and Prevention Unit coordinated a pilot program to collect data called the Emergency Department Injury Surveillance System (EDISS.) Under this program, funded for just three years until 2003 by Health Canada, 10 emergency departments in the Fraser, Northern and Interior health regions collected data in the E.R. about the types of injuries, the gender and age of the person injured and what they were doing at the time of the injury. The data was essential to help researchers begin to understand the nature and extent of injuries in B.C. and to design, plan and evaluate injury prevention programs. This program needs to be revived. Alternatively, a national program being promoted by the Canadian Institute for Health Information called NACRS (National Ambulatory Care Reporting System) is a new data collection system being spearheaded to capture information on patient visits to hospital and community-based ambulatory care. This data collection system, if applied to emergency departments across B.C. and augmented with specific injury-related data collection points, could also provide invaluable evidence about the prevalence and incidence of injuries in B.C. and be an essential tool for evaluating various injury prevention strategies. The new Public Health Agency has earmarked $10 million over two years to strengthen surveillance standards and data collection across Canada for all public health information and federal money is also available to enhance health information systems. Injury prevention advocates should explore whether any of this money can be used to enhance injury surveillance.

Two other key initiatives are also needed, witnesses said.

- Investment in research to produce evidence-based, cost-effective injury prevention initiatives. Less than 1 percent of all health and medical research in Canada goes to injury research. The Committee believes that injury research has been ignored, but that much of this investment could be funded from grants from national research organizations such as the Canadian Institute for Health Research and from the business and corporate community, particularly those who produce and market products that are associated with higher rates of unintentional injury. But researchers, the public, and the government need to champion the importance of injury prevention research.
- That a comprehensive national injury prevention strategy be created, most logically through the new Public Health Agency of Canada.

The Committee recommends:

Recommendation #20:

An effective injury surveillance system in B.C. should be established in B.C.

Recommendation #21:

The need for injury prevention research should receive a higher profile.

Recommendation #22:

The B.C. government lobby the federal government and the new Public Health Agency of Canada for a national strategy for injury prevention.

Chronic Disease Management

One in three BC adults is living with a chronic disease

As many as one in three adults in B.C. are living with a chronic disease. Chronic disease management (CDM) is a form of secondary prevention that helps those thousands of individuals to live better, healthier lives with their illness. Dr. Patrick McGowan, a University of Victoria professor who specializes in patient self-management, gave the Committee a helpful twist to the often-used analogy of illness being like a person falling in a river: while public health prevention aims to stop people falling into the river in the first place, and acute care medicine aims to pull them out, chronic disease management recognizes that most people who develop chronic diseases are in the river for the rest of their lives and they need, like a life raft or life preserver, the support, skills and good medical care to enable them to travel in the current as safely, comfortably and in control as possible.

Chronic disease management has four essential features:

- information management systems, such as computerized flow charts and patient registries, so doctors can track and recall these patients for preventive tests and treatments;

- strict adherence to treatment protocols so patients get the most evidence-based beneficial care;
- multidisciplinary teams so patients have easy access to a range of expertise including dietitians and therapists;
- and resources for patient education and self-management training that give patients the tools, skills, information and confidence they need to help better manage their disease.

The long-standing problem with the design of our existing health care system, even for chronic diseases, is that it is set up to react to problems. It has not been designed to proactively manage problems of chronic disease to prevent a worsening of the illness or to prevent complications from occurring. That means people with chronic diseases are often lurching from one health crisis to another.

As we noted in our earlier reports, B.C. is emerging as a leader in Canada for CDM initiatives and a number of projects and collaborative models are blossoming in the province, with very positive results. A Victoria-based collaborative, The South Island Chronic Disease Management project, launched last year, recently won a prestigious national award, the 3M Health Care Quality Team Award. The Victoria project features 32 family doctors working collaboratively with a specialized information system and care protocols to ensure their patients with diabetes, depression and congestive heart failure get proactive care. The system alerts doctors to when certain patients need be recalled to receive specific tests, manages and flagging laboratory results, and helps ensure no patient falls through the cracks. Under the project, doctors still bill MSP for their fees in caring for their patients with these three illnesses, but in addition they are reimbursed for the time to develop patient registries and recall systems, to work with other members of the team, attend meetings of the collaborative, and to collect research data to contribute to the project's evaluation.

As noted by BC Medical Association president Dr. Jack Burack in his presentation to the Committee, the 2002 working agreement with between B.C.'s doctors and the government established a $20

New models of medical practice

For two years in the mid-1990s, the small rural community of Fraser Lake, about 160 km west of Prince George, was without a doctor. With some 1,200 citizens, the town's succession of previous doctors had burned out and left, tired of constantly being on call, overworked and stressed.

That changed in 1999 when a new agreement was negotiated that established a clinic that would pay doctors a contract salary, rather than the traditional fee-for-service. In addition, the clinic would have a team approach in which trained nurses would see and manage simple health problems. Two young doctors, John and Sarah Pawlovich, signed on. As the Pawlovich's told the Committee, the clinic design, team focus, and payment structure "creates a very stable medical community." As such, the clinic is able to provide more comprehensive preventative care, chronic disease management, and more advance clinical care like endoscopies, day surgery, and stress tests. Not only that but the "happy" collegial environment has enabled the region to attract two more young doctors as well as providing a clinical teaching setting for UBC students.

"When you are overworked and overburdened, putting out fires, you can never get to the next level of health prevention and proactive disease management..." John said. The Pawlovichs note that while fee-for-service has its merits and tends to be preferred by older doctors, more and more young doctors are preferring contracts that establish agreed upon services and promote a stable medical practice, especially in a rural environment.

Dr. Gavin Stuart, dean of the Faculty of Medicine also told the Committee that medical education in recent years has been evolving to promote the team approach to health care and promote models of care that best meets the needs of the communities the doctors are trying to serve.

million annual fund for general practice initiatives, most of which is being used to establish chronic disease projects. After just one year of operative, most of the CDM projects are already showing evidence of better use of the protocols and improved outcomes for patients: more patients are getting the proactive tests and treatments they need. Doctor and patient response is also very positive. The Committee applauds the CDM initiatives.

Self-management

An important piece of the CDM program is empowering patients to manage their disease. Individuals with chronic disease must live with their condition 365 days a year — only a small portion of that time is actually spent with a doctor, nurse or specialist. Dr. McGowan, of UVIC, told the Committee that supporting and enhancing chronic disease patients' self management skills is essential. BC is leading Canada in this new way of empowering and motivating patients to take charge of their illness.

Sometimes called self-care, it is a process that is more than simply educating the patient about the condition. Traditional patient education usually features a health professional giving edicts: "Just do this and do that" (eat a healthy diet, go out and exercise.) But that approach often fails, notes McGowan, as the patient may not know how to bring the action into the context of his or her daily life. They may not have the confidence or ability to make the change. "The goal of the traditional patient education is compliance, but the goal of self-management is giving the patient greater confidence in his or her ability to make a life-improving change — called self efficacy. We know increasing self-efficacy yields better clinical outcomes," McGowan said.

"The goal of self-management is giving the patient greater confidence in his or her ability to make a life-improving change." – Dr. Patrick McGowan, UVIC

The process, in fact, has a lot in common with the theories of fostering healthy communities, schools, and workplaces, but on the micro, individual scale: top-down, imposed solutions or edicts don't work. It must be a process of enabling rather than telling. The individual needs to identify the aspects of his or her disease that are giving troubles, set a plan or priorities to address the issue, and then take steps that they have identified themselves to improve it. "As patients develop the skills and confidence to address their own problems, their confidence builds. Confidence breeds confidence and that continues to last long after the intervention is over," McGowan said.

The process is taught through a free course, called "Living a Healthy Life with Chronic Conditions." It takes place in groups of about 10 people with chronic disease and is led by two people from the community, also with chronic disease, who have been specially trained to deliver the program. Patients attend for a total of 15 hours over six weeks and gradually develop the skills to become an informed, active patient who is able to adhere to treatments and manage the impacts of their illness on their functioning, emotions, and relationships. So far 677 leaders have been trained in B.C. and more than 3,000 people have completed the program — it has even been translated and is being delivered in Chinese. The program has been funded until 2006 with $60,000 for each health authority and is being gradually rolled out across the province. It deserves long-term support.

Broader awareness of this program is lacking among medical professionals and people with chronic diseases. A toll-free number, 1-866-902-3767, can provide information about the locations and dates of the next round of courses. In depth information is also available through the UVIC Centre-on Aging Chronic Disease Self Management website: www.coag.uvic.ca/cdsmp/

Recommendation #23:

The Committee recommends that initiatives that improve chronic disease management and patient self-care continue to receive strong support in the province.

Recommendation #24:

The Committee supports creative medical models that promote chronic disease management, primary health care teams, and feature alternate methods of physician remuneration. The voluntary option for doctors to choose to work in these new practice models should be promoted across the province.

Early Childhood Development

The years between zero and age six are a crucial time in a child's life. The nurturing, skills, and experiences that occur in early childhood influence health, well-being and learning skills that lasts a lifetime. Studies show the quality of those early years even influence later rates of heart disease, diabetes, back pain, mental illness, and even Alzheimer's. As such, when trying to improve the health of the BC population, it is essential we look at what is happening among our youngest citizens.

Fortunately, that close examination is being made much more feasible with the remarkable work of Dr. Clyde Hertzman, associate director of the Centre for Health Services and Policy Research at University of B.C and the Director of the Human Early Learning Partnership (HELP), an interdisciplinary network of early childhood development researchers from B.C.'s major universities. Hertzman has a long history in studying the social determinants of health, but in recent years he and his team of researchers have undertaken a ground-breaking research project, the first of its kind in the world, that is shedding new light on the complex nature of children's early years and what we can do in our communities and families to nurture them.

"In B.C. we know, neighbourhood- by neighbourhood, how kids are developing by the time they reach school"- Dr. Clyde Hertzman, UBC

Between 2000 and 2004, Hertzman and his team have been conducting revolutionary work to map child development in all 59 school districts in the province. From the results, we now know how BC children are developing in every single neighborhood in B.C. In short, some children are doing very well and others are not. Often that difference is directly reflected in the sort of neighborhood environments where they are raised.

The work would not be possible without the cooperation of all the schools and school boards in B.C., especially kindergarten teachers. They helped collect the information as the children

entered the school system as a way of assessing the child's experiences in the five previous years. The kindergarten teachers completed a checklist questionnaire to assess each and every child in the classroom on some key measurements of child development. These measurements covered three broad realms: physical development, social and emotional development, and language and cognitive development. Physical measures included large and small muscle coordination, energy levels, hygiene etc. Social and emotional measures included cooperation, tolerance and empathy, self-control and self-confidence, etc. Learning and cognitive measures include how fluently the child can communicate, in either English or their mother tongue, and whether they show interest in books, letters, words, and numbers.

Although the information was collected on each child, the questionnaire did not identify individual children and was analysed at the group level. But it did include the child's postal code that enabled the results to be plotted by neighborhood on maps of each of the school districts. The results have revealed distinctive and astonishing relationships between the level of school readiness in children and the characteristics of the neighborhoods they live in — income level, affordability of housing, neighborhood crime rate, number of parks, playgrounds, libraries and childcare options, and measures of social cohesion and social capital. The results, when compiled together, found that in some neighborhoods fewer than 10 percent of the children were showing signs of vulnerability on any of the three realms of development, but in others, sometimes right next door, up to 50 percent of children were vulnerable on at least one scale or more.

In some neighbourhoods almost 50 percent of children are vulnerable on one or more scales of development

Surprisingly, while parental income, education and parenting style do have a strong influence on whether children are ready for school, the quality of neighborhoods can either undermine or protect kids, placing them higher or lower on the vulnerability scale than would be expected from the neighborhood income level or level of education. Now the job is to understand where these differences are coming from. Hertzman has his theories -such as neighborhoods with a high social capital and cohesiveness as well as good resources for children — libraries, playgrounds, preschools, childcare, community centres and enrichment programs — correlate to better adjusted children who are more prepared to learn.

Hertzman told the Committee that this information will help us target and measure programs to improve early childhood development. It is already being used by non-profit groups and community organizations in each of the school districts to help address specific issues in each of the regions. With the Federal and Provincial government now working out the details of the National Children's Agenda and allotting at least $1,500 per child, the maps — if updated regularly — will give us graphic and clear illustration if our progress and actions are making a difference.

The maps also show a clear role for the health care system to take a more proactive role in the early identification and treatment of early childhood problems — particularly vision, hearing, dental, speech and language. The maps, for example, show the number of children who arrived in kindergarten with visible evidence of tooth decay. Some regions had fewer than 13 percent, while others had almost 49 percent, showing many people are not aware of some free dental services that are available to young children. Since the health care system is

often the only place these children are seen before entering kindergarten, there is a much-needed role for doctors, clinics and public health nurses — such as during immunizations — to pick up early on correctable problems or link families to services. Some universal screening programs, for example, can identify the children who are at risk for developmental delays early in their life. It is important to note, however, that increased screening and identification works only if there are adequate services and support to help the child. If children are identified early only to begin waiting in a long queue this will only increases parents' frustration and dismay and do little to help the child.

Recommendation #25:

The Committee recommends the early childhood mapping project be used as an evaluation framework for progress in addressing early childhood development issues. The maps should be updated at regular intervals.

Recommendation #26:

The Committee recommends that the health care sector be utilized more effectively to take a proactive role in the early identification and treatment of early childhood problems. In addition, children who are identified must be able to effectively access proven and effective services to treat the problem.

Establishing 2-1-1 Service in B.C.

In B.C. a huge number of community, non-profit, volunteer and government organizations are providing a wide range of supportive services to help our citizens improve their lives. Shelters for abused women, free dental screening for toddlers, help for drug addicts, literacy programs for youth and adults, food banks, training programs, support groups, specialized health organizations are just part of a long list of services. Each and every one of them can be seen as valuable asset to address the social determinants of health, to prevent the ill health and breakdown that can come from bearing life's problems, and thus improve the well- being of our residents. But how do you find the services? Sorting through the maze of information, the different names, functions and mandates, and the awkward phone numbers can pose a challenge for a person with years of university education, let alone someone with limited education or English-as-a-second-language.

That is where an important new development, now unfolding across North America, can make a difference. Like the emergency number 911, the telephone number

How 211 changed a life

Atlanta Georgia was the first place in North America to develop a central 211 information service in 1997. The US 211 website tells the story of Kim, a sexual and physical abuse survivor and a single mother of four children who first dialed 211 after seeing a poster in a bus station where she was stranded with her children, with no money and no place to go. The service linked her to an organization that picked her up that night, and provided food, clothing and temporary shelter. Soon after, wanting to improve her life, Kim called 211 again to help her find job training. She was linked to a 17-week program and on completion had 13 job offers. Now, almost finished college, she works in a major hospital with pregnant or at risk teenage girls, has remarried and owns her own home.

www.211.org

211 is a simple, easy to remember number that will soon link people to the local community, non-profit and government services that can make a difference to their lives. In short, it helps people to help themselves.

In the last seven years in the U.S., 211 has been established in 139 communities in 27 states and serves about 98 million people, or 33 percent of the US population. Most of those are on the eastern seaboard. Portland Oregon is the only city on the west coast that now has 211 although the majority of communities are working to establish it. In Canada, development has been slower but the Canadian Radio and Television Commission has reserved 211 in perpetuity across the country to enable all communities and provinces the time to develop the telephone link. Now municipalities, non-profit organizations, telephone companies and others are working at the grass roots level to activate 211 across the country. Toronto was the first online in 2002; Calgary and Edmonton have just launched the number in 2004. Many other large communities in Canada are working on it.

In B.C. the United Way of the Lower Mainland and Information Services Vancouver, an organization offering telephone support for more than 50 years, are leading the coordination. There are two potential rollout models. One would be to have the Greater Vancouver Regional District go first using Information Services Vancouver to provide the service. This could be the fastest way to become operational and would serve a large portion of the BC population. This, however, would not help other cities or communities around B.C., each of whom would have to solve infrastructure problems, find stable financing, deal with multicultural issues and solve a host of other logistical, structural, technical, and informational issues. In a written submission to the Committee, Martin Addison, head of business services for United Way of the Lower Mainland suggested the second route would be to fund a business plan that would establish a coordinated, financially sustainable rollout across the province between 2005 and 2008 that would work out all the details in advance. The United Way is attempting to raise $300,000 to develop the business plan and establish the coordinated comprehensive plan to establish 211 in B.C.

The Committee is unable to assess which model would be best for the citizens of B.C. However, the Committee strongly supports the establishment of 211 in the province.

Recommendation #27:

The Committee recommends that the B.C. government examine the options for establishing 211 in the province and move quickly to facilitate the most effective and cost-efficient method.

Prevention Actions for Future Discussion

The topics that have been covered in this report only begin to address the many fruitful areas that could benefit from a greater focus on prevention activities. Unfortunately, the Committee did not have the time nor the mandate to fully address other issues. We chose specifically to look at the costs of preventable illness and injury in B.C. and the general philosophy of what works in health promotion to imp-rove health and change behaviour. Then we applied those principles to explain tobacco control's successes and to help focus on

what needs to be done to begin to address the next big looming threat of diet, physical inactivity and obesity in B.C.

Many other areas, however, could provide significant returns on investment and prevent disease, illness and suffering. The Committee believes the following areas would benefit from increased discussion and exploration in the future:

- **Clinical prevention actions:** Many medical actions in doctors' offices, hospitals or clinics can help reduce or prevent disease, or spot it in earlier stages to help improve outcomes. Regular PAP tests for cervical cancer, mammography after 50 and other screening tests or diagnostic tests can spot illness and disease at earlier, more treatable stages. Immunizations, too, can provide protection from some potentially devastating illnesses in both children and adults. New vaccines, such as a promising one for cervical cancer, may soon be available. A number of clinical actions, however, are controversial, or are still being debated as the evidence is inconclusive. For three decades a special Canadian group of researchers, the Canadian Task Force on Preventive Health Care, (www.ctfphc.org) has been sorting through research evidence on clinical prevention and providing guidelines to doctors and governments in Canada about which actions should be taken and which should not. Ensuring that we are getting the most benefit from clinical prevention actions — funding the ones that work and foregoing the ones that may be useless or even harmful — is worthy of an in depth examination.

- **Alcohol and drug abuse:** These lifestyle behaviours are strongly rooted in the social determinants of health and cause a great deal of suffering, disease, injury and death in B.C. Research shows that the philosophies and strategies presented in Section 3 about what works in health promotion can be effective for preventing the abuse of alcohol and drugs and could be the focus of future deliberations.

- Mental health: Mental illness is not solely a result of genetics or biological factors. A person's prenatal health, early childhood experiences, family dynamics, neighborhood, socio-economic standing and other factors, such as drug or alcohol use, exposure to violence or abuse, can all have a bearing on whether a person goes on to develop a mental illness. The rates of mental illness can be reduced, and some cases prevented, by policies that support healthy families and communities and coordinate efforts in mental health services.

- **Sexual Health:** Sexually transmitted diseases such as AIDS, HIV infection, herpes, chlamydia, syphilis and gonorrhea can have devastating impact on the lives of those who become infected and can swiftly be passed on to others, including infants in utero. These diseases can be reduced or prevented by individual actions as well as supportive policies and programs. Fostering responsible sexual behaviour not only reduces the rates of STD but also the rates of teen pregnancies and unintentional pregnancies for all ages.

- **Prevention among our Aboriginal population:** For generations, Aboriginal people in B.C. have experienced worse health status, such as shorter lives, higher standardized mortality rates and higher infant mortality rates, than other British Columbians. The 2002 Annual Report of the Provincial Health Officer, which examined progress toward the province's health goals, found encouraging trends, such as infant mortality rates almost equal to the general B.C. population and lengthening life spans. Nevertheless, Aboriginal

people in B.C. have about twice the smoking rate, three times the diabetes rate, and twice the injury rate of the general population. These and other health disparities have been profiled in depth in other government reports. But continuing to improve Aboriginal health will require increased collaboration and partnerships. In particular, partnerships with the federal government and particularly Aboriginal communities are needed to find successful ways to address the social determinants of health — income, education, employment, autonomy etc. — that have such a crucial influence on the health and well-being of Aboriginal people.

- **Prevention in the multi-cultural population:** With each passing year, B.C. is becoming more ethnically diverse and enriched by the new families and individuals from around the globe who choose British Columbia as their new home. Do prevention strategies work as effectively in these populations? Are there specific health issues that are of leading concern among certain multi-cultural groups that are not getting enough attention though mainstream programs? These questions and more need to be answered in future explorations.

- **Complementary and alternative health services:** Many British Columbians use complementary or alternative medicine — such as chiropractors, naturopaths, homeopaths, acupuncturists, massage therapists and others. Emerging evidence, as well as many anecdotal accounts, suggests some of these complementary practices may have preventive benefits that should be further explored, studied, and potentially supported. This report is unable to delve into this huge area, but it could be topic for future discussion. In the United States, the U.S. Congress in 1998 established a new institution under the structure of the National Institutes of Health (NIH). One of 27 NIH institutes, the National Center for Complementary and Alternative Health, is dedicated to exploring the field through rigorous science study, the training of practitioners to conduct randomized control trials, and the disseminate of well-run research studies. This is an area to watch as more research establishes the safety and effectiveness of complementary techniques.

CREATING HEALTHY POLICIES

In this final section, the Committee examines a few legislative or policy changes the government could consider to help align our efforts to achieve the goal of health improvement in B.C. with our actions. As well, some specific tax policies can provide incentives or disincentives to encourage healthier behaviours among B.C. citizens.

Measuring progress in health improvement

What we measure gets done. That is the motto of the B.C. Progress Board. In July 2001, the Premier formed the BC Progress Board, an independent panel of eighteen eminent British Columbians from a variety of backgrounds. The Board provides strategic advice to the Premier on measures to improve provincial economic performance and the well-being of British Columbians. The rationale behind the board is that the measurements of B.C.'s progress, where we are doing well and where we are faltering, can form the backbone to the policy agenda of government.

The Progress Board has much in common with the "Genuine Progress Index," promoted by Nova Scotia policy analyst Ron Colman and others across Canada and North America, as a superior alternative to the Gross Domestic Product. The GDP, Colman and others argue, is a very flawed measurement of human progress. It only measures economic growth rates but does not distinguish whether that economic growth was beneficial or harmful. The more money that is spent, the more GDP grows, including spending on jails, war, sickness, crime, and other negative societal events. "The only other biological organism that shares our economic dogma that more growth is better is the cancer cell," says Colman. Vital societal, environmental and health indicators, such as volunteer rates, air quality, number of people physically active, for example, are invisible and not counted. The GPI and the Progress Board are both expanding the number and type of indicators that we collect and tally to give us a better understanding of how our society is progressing.

This attention to collecting key progress indicators is not a new concept in B.C. During the 1990s, the Provincial Health Office, during years of careful and detailed work, established six over-arching health goals for the province. These encompassed improving living and working conditions, personal capacities and skills, physical environments, health services, aboriginal health, and reducing preventable illness and injury. Each goal was linked to number of indicators — standardized statistical measures or data sources — that could tells us whether we are improving or worsening in comparison to the goals. The aim was to have the Health Goals serve as a guide for a unifying policy framework for government planning. While that has not been fully achieved, the PHO does report every three years on B.C. standings compared to the Health Goals and it is very influential among public health practitioners and health policy formulators. The last report was in 2002, and this collection and reporting should continue. However, there is room for the B.C. Progress Board, as an economic body of prominent business leaders, to widen its scope and also begin to mark our progress towards health improvement. This would put the focuses wider a field, outside the boundaries of health care and public health.

The Board already reports on a number of measures that are health status indicators and population determinants of health. These include graduation rates, literacy levels, and welfare rates. Past reports have addressed issues like obesity and physical activity. However, it could be asked to formally incorporate key health promotion indicators as part of its mandate. For example, other indicators, such as community participation, volunteer rates, and school readiness might become regular indicators. By making physical activity, obesity rates, tobacco use, and even fruit and vegetable consumption part of the core indicators, these issues will be kept front and centre as we measure progress towards a better B.C. For as we know, what gets measured, gets done.

Recommendation #28:

The Committee recommends that the BC Progress Board be asked to permanently measure health and wellness indicators along with economic indicators to enable a more balanced and complete picture of our genuine progress in the province.

Healthy Taxation Policies

Our tax policies should reflect what we value and the kind of society we want to promote. For that reason both federal and provincial taxes should be aligned to promote healthy, well-functioning families, positive child development, fit and active living, good diet and other attributes of a prosperous, just, and equitable Canada. Our society has changed dramatically over the last 40 years — even over the last decade — but our tax policies have been slow to catch up. We need to shift taxes and reform taxes to help encourage or reward actions. We want to discourage actions that have a negative impact on our health or on our society. Actions can include setting or expanding allowable deductions, creating refundable or non-refundable tax credits etc. It is important to ensure, however, that tax changes do not simply favour mid to high-income earners who pay the most taxes. Lower income families need encouragement and help, for example, to afford enrolling children in a sports program, which are often beyond their budget.

The provincial government has the ability to set some tax policies. Other tax policies must be set by the federal government. Some potential actions include:

- **Sales tax changes:** In its first report, the Committee recommended that the provincial sales tax be removed from all sports equipment, gym clubs, and physical activities. The argument can be made that other items should also be considered for the removal of sales tax, such a books, musical instruments etc. that promote well-rounded, high functioning citizens. The federal government could also remove GST from health-enhancing products and activities. An alternate route would be to ensure that the sales taxes collected from those items are funneled back into the creation of programs and initiatives that enhance health.
- **Junk Food Tax:** Like taxing tobacco, this action is being debated in many developed nations but it remains highly controversial. The problem is semantics: what truly constitutes a junk food and how do we define it? Some say clear distinctions could be established with the help of dietitians and, like tobacco, create a disincentive, especially if

the junk food in a vending machine was more costly than a healthier choice. In addition, like tobacco, it could fuel a source of income that would help fund some health promotion activities. One method of taxation could be by simply making snack foods - chips, candy, pop, doughnuts, chocolate bars — no longer exempt from PST. We could also add PST to certain restaurant items that are deemed by dietitians to be unhealthy, such as french-fries, pop, high transfat foods, deep fried twinkies. The BC tax branch already has a clear delineation of items that are taxed and are not taxed and could be asked to alter that structure. The Committee recommends that the government further explore this option.

- **Tax credits for activities that are known to improve health:** A family can spend many hundreds of dollars each year enrolling a child in soccer, dance, karate, hockey and other activities. The Government could provide tax credits up to a certain maximum to enable families to deduct the cost. Other activities create positive child development, such as music, art, or theatre could also be considered for deductions.
- **Changes to allowable deductions:** Working individuals are still able to deduct 50 percent of a business lunch, but these days important discussions are as likely to occur, or at least should occur, over the cross trainers at the local gym. However, the tax act does not allow deductions for more modern ways of doing business that may be healthier for us in the long run. No deductions for health club, gym memberships or other athletic activities are allowed even though research clearly shows that fitness and physical activity improves health and productivity.

Federal childcare deductions are also detrimental to fostering healthy development among children not enrolled in certified daycare or certified after school programs. For example, a parent who pays a caregiver to look after their child can claim a childcare tax deduction between $4,000 and $7,000 per child per year. It could be a nanny, a baby sitter or even a 14-year-old who puts the kid in front of a television. But, if during that childcare time, the child learns a specific skill or does a specific activity under a skilled professional — such as takes a piano lesson from a music teacher, learns art after school, or takes a gymnastics program or a dance program — it is not an allowable deduction. The tax act actually says "if the child is benefiting from the activity" it cannot be a childcare deduction — the corollary of which is that only childcare that does not benefit the child is allowable. This is true even if during the class time the parent is working, paying taxes on the income, the professional is reporting and being taxed on the earned income, and the child is receiving needed supervision and care under another adult. This needs to change. If we are trying to encourage the flowering of our children, all activities that can be shown to benefit them — physically, emotionally, intellectually, artistically, spiritually — should be an allowable deductible up to a certain maximum amount per year.

Recommendation #29:

The Committee recommends that both the provincial and federal government examine modernizing the tax structure and amend tax policies, including establishing tax credits, to ensure tax policies are fair and equitable, promote strong and healthy families, childhood development and health and wellness in our society.

EMBRACING THE GOOD NEWS AMONG HEALTH CARE TROUBLES

Throughout the pages of this report we have presented evidence and policy suggestions to make British Columbians healthier. At times the magnitude of job seems daunting – there is so much we need to prevent. But taking the action to become healthier is something all British Columbian can celebrate. Unlike the usual doom and gloom scenarios that so often arise when we look at the shortcomings and pressures facing our beleaguered health care system, this part of health care is good news.

We have the power and ability to become fitter, healthier, and more active. We can prevent more injuries. We can make our schools, workplaces and communities more vibrate, healthy places. We can build our social networks, our trust, and our engagement and create more livable neighborhoods that help us all, especially our children, flourish. All of this needs attention. However, the Committee routinely asked witnesses who presented a litany of actions we need to take, "Where would you start? What is the highest priority?" The majority responded: obesity, inactivity, and exercise. The Committee agrees: while other policies and actions that enhance prevention should not be ignored, making British Columbians fitter and healthier by 2010 should become a prime focus over the next six years.

BC has a "leg up" on the road to health and wellness

British Columbians already have a considerable advantage over other Canadians on our path to health and wellness. We already have the fittest, most active population in Canada. There is large room for improvement, but we are better than most. We have the lowest number of smokers in Canada. We have the longest life span. We live in a geographic area noted for its beauty and the ready availability of a wide range of healthy outdoor pursuits for all levels of ability. We are hailed among the international health promotion community as having some of the leading thinkers and researchers in the world about how we make a change in this fruitful area. We can bring all of these advantages together and build even more on our progress. Together, with the right combination of policies and programs, we can get more British Columbians experiencing the joy of movement, the increased vitality that comes with eating a healthier diet and living a more active lifestyle, and benefiting from the improved mental outlook that comes with adopting those changes.

In short, embracing this spirit of excellence and good health is a perfect fit with the goals of the 2010 Olympics. Together we can greatly reduce the toll of preventable illness and injury in British Columbia. In doing so, we will spend our precious health dollars in a more efficient and effective manner, greatly increase many individuals' quality of life, vitality, and life span, and increase the productivity and economic health of our province.

> *"It is an invitation to experience well-being…Once people get a taste of changing just one thing in their life, they are amazed how it then reaches into other dimensions."* –Dr. Lara Lauzon, Assistant Professor, Department of Physical Education, University of Victoria

APPENDIX A: WITNESS LIST

Dr. Penny Ballem, Deputy Minister Ministry of Health Services	(10-Jun-04, Vancouver; 22-Jun-04, Victoria)
Dr. Frederick Bell, Director Coalition for Active Living	(22-Jun-04, Victoria)
Dr. Jack Burak, President British Columbia Medical Association	(28-Sep-04, Victoria)
Dr. Robert Conn, Chief Executive Officer SMARTRISK	(28-Sep-04, Victoria)
Lisa Forster-Coull, Consultant BC Nutrition Survey	(22-Jun-04, Victoria)
Dr. Barry Davidson, President and CEO Health Action Network Society	(07-Jul-04, Victoria)
Brian Dolsen, Chair 2010 LegaciesNow Society	(28-Sep-04, Victoria)
Michael Epp British Columbia Medical Association	(28-Sep-04, Victoria)
Don Foxgord Tourism BC	(28-Sep-04, Victoria)
Lorna Hancock Health Action Network Society	(28-Sep-04, Victoria)
Dr. Trevor Hancock, Consultant in Public Health Ministry of Health Services	(15-Sep-04, Victoria)
Dr. Paul Hasselback, Senior Medical Officer Interior Health Authority	(29-Sep-04, Victoria)
Dr. Michael Hayes, Professor Department of Geography, Simon Fraser University	(29-Sep-04, Victoria)
Dr. Clyde Hertzman, Associate Director Centre for Health Services and Policy Research, University of British Columbia	(06-Oct-04, Victoria)
Dr. Perry Kendall, Provincial Health Officer Ministry of Health Services	(10-Jun-04, Vancouver)
Peter Kiessling B.C. Coalition for Health Promotion	(7-Jul-04, Victoria)
Joanne Konnert, Chief Operating Officer Fraser Health Authority	(29-Sep-04, Victoria)
Dr. Andrew Larder, Medical Health Officer Fraser Health Authority	(29-Sep-04, Victoria)
Dr. Lara Lauzon, Assistant Professor Physical Activity in Children, Department of Physical Education, University of Victoria	(22-Jun-04, Victoria)
Marion Lay, President and CEO 2010 LegaciesNow Society	(10-Jun-04, Vancouver)
Gillian Leverkus B.C. Coalition for Health Promotion	(07-July-04, Victoria)

Dr. James Lu Vancouver Coastal Health Authority	(14-Sep-04, Victoria)
John Luton, Executive Director Capital Bike and Walk Society	(29-Sep-04, Victoria)
Janice Macdonald BC Healthy Living Alliance, Dietitians of Canada, BC Region	(10-Jun-04, Vancouver)
Dr. Heather Manson Vancouver Coastal Health Authority	(14-Sep-04, Victoria)
Dr. Heather McKay, Associate Professor Michael Smith Foundation for Health Research	(14-Sep-04, Victoria)
Dr. Patrick McGowan, Research Affiliate Centre on Aging, University of Victoria	(15-Sep-04, Victoria)
Dr. Lorna Medd, Senior Medical Officer Northern Health Authority	(28-Sep-04, Victoria)
Dr. John Millar Provincial Health Services Authority	(07-Jul-04, Victoria)
Dr. John Pawlovich Fraser Lake Medical Clinic	(29-Sep-04, Victoria)
Dr. Sarah Pawlovich Fraser Lake Medical Clinic	(29-Sep-04, Victoria)
Karen Pedersen Health Action Network Society	(07-Jul-04, Victoria)
Ronnie Phipps B.C. Coalition for Health Promotion	(07-Jul-04, Victoria)
Dr. Ian Pike, Unit Director B.C. Injury Research and Prevention Unit	(28-Sep-04, Victoria)
Dr. Irving Rootman, Professor Michael Smith Foundation for Health Research	(14-Sep-04, Victoria)
Dr. Richard Stanwick, Chief Medical Officer Vancouver Island Health Authority	(28-Sep-04, Victoria)
Else Strand B.C. Coalition for Health Promotion	(07-Jul-04, Victoria)
Dr. Gavin Stuart, Dean Faculty of Medicine, University of British Columbia	(15-Sep-04, Victoria)
Brent Warner, Provincial Specialist Direct Farm Marketing / Specialty Crops Ministry of Agriculture, Food and Fisheries	(28-Sep-04, Victoria)
Laurie Williams B.C. Coalition for Health Promotion	(07-Jul-04, Victoria)
Bobbe Wood BC Healthy Living Alliance, Heart and Stroke Foundation of BC & Yukon	(10-Jun-04, Vancouver)
Dr. Jay Wortman, Regional Director First Nations and Inuit Health Branch, Health Canada	(07-Oct-04, Victoria)
Dr. Annalee Yassi, Director Institute of Health Promotion, University of British Columbia	(29-Sep-04, Victoria)

Written Submissions

Martin Addison, Vice President, Business Services
United Way of the Lower Mainland, 211 Initiatives

Dr. John Frank, Scientific Director
Institute of Population and Public Health, Canadian Institutes of Health Research

Linda Lytle, Registrar
College of Pharmacists of British Columbia

Howard Searle, President
The Registered Nurses Association of British Columbia

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APPENDIX C: WEBSITES

Better Together (An initiative of the Saguro Seminar on Civic Engagement in America to boost community social capital, based at Harvard University's Kennedy School of Government)
www.bettertogether.org

British Columbia Centre for Disease Control
www.bccdc.org

BC Injury Prevention and Research Unit
www.injuryresearch.bc.ca

Canadian Fitness and Lifestyle Research Institute
www.cflri.ca

Canadian Institute of Health Information
www.cihi.ca

Canadian Public Health Association
www.cpha.ca

Canadian Task Force on Preventive Health Care
www.ctfphc.org

Institute of Medicine, National Academy of Sciences
www.iom.edu

Office of the Provincial Health Officer
www.healthservices.gov.bc.ca/pho/

Partnership for a Walkable America - US national coalition – has a checklist to assess the walk-ability of your community.
www.walkableamerica.org

Pedometer Accuracy
www.pedometers.com/reviews

Public Health Agency of Canada
www.phac-aspc.gc.ca

Smart Risk Canada
www.smartrisk.ca

US Center for Disease Control – Nutrition and Physical Activity Site
www.cdc.gov/nccdphp/dnpa/index.htm